The Boston Medical and Surgical Journal

TABLE OF CONTENTS

February 15, 1923

ORIGINAL ARTICLES.

The Diagnosis of Cardiovascular Syphilis. By *William D. Reid, M.D.*, Boston 189
The Viewpoint of a Physician. By *John H. Nichols, M.D.*, Tewksbury, Mass. 193
The Physiology of "Autosuggestion." By *Donald Gregg, M.D.*, Wellesley, Mass. 195
The Value of a Medical Society to the Community and to Its Own Members. By *David R. Lyman, M.D.*, Wallingford, Conn. 196

MEDICAL PROGRESS.

Progress in Medicine: Recent Advances in the Treatment of Anemia. By *Thomas E. Buckman, A.M., M.D.*, Boston 200

Current Literature Department 206

EDITORIAL DEPARTMENT.

M. Coué in Boston 209
The Bacterium Pneumosintes 210
Boston Tuberculosis Association 210
Plea to Congress 210
Bismuth as a Substitute for Arsphenamine 210
Scientific Monopolies 211

News Notes 211
Maine News Items 211
Legislative Matters 213
Annual Meeting of the Boston Tuberculosis Association, January 25, 1923 213
Delinquency as a Public Health Problem 215
Resolutions 216
Meeting of the Massachusetts Association of Assistant Physicians 216

MISCELLANY.

The New "Influenza" 217
Rhode Island Society of Mental Hygiene 217
Division of Mental Hygiene 217
Elections to Membership in National Committee for Mental Hygiene 217
Federal Income Tax Facts 218
Recent Deaths 219

CORRESPONDENCE.

Medical Relief for Our Citizens. *Oliver H. Stansfield, M.D.* 219

United States Civil Service Examinations 220
Notice, Society Meetings 220

Original Articles.

THE DIAGNOSIS OF CARDIOVASCULAR SYPHILIS.*

BY WILLIAM D. REID, M.D., BOSTON.

Syphilis of the heart and aorta maims and kills those in the prime of life. The picture presented by advanced cardiovascular syphilis, and especially by an aortic aneurysm with its threat of rupture, is not pleasant to contemplate. Experience shows that the most skillful treatment of these advanced stages is of but little avail. It is urgent, therefore, that the physician should make every effort to diagnose cardiovascular syphilis in its early stages and institute antiluetic treatment before the integrity of the heart and aorta is seriously impaired.

Examination of the clinical and postmortem records[1] of one hundred successive patients dying in the medical wards of the Boston City Hospital, January, 1921, to February, 1922, discloses seven cases in which syphilis appears to be the cause of the changes in the heart and aorta. It is disappointing to note that in but one of these seven necropsies did the pathologist definitely state that the lesions were due to syphilis; in the remainder the description is purely anatomical and contains no comment as to etiology.

The above series of one hundred cases contained sixty in which the heart was abnormal and gives, therefore, a rating of 11.5 per cent. to syphilis as the cause of disease of the heart. A. R. Lamb, of the Presbyterian Hospital, New York, estimates[2] that 15 to 25 per cent. of organic heart disease in a general hospital is syphilitic, and it is present in 50 to 75 per cent. of patients affected by syphilis. Figures obtained from previous studies[3] are in agreement with those of Lamb, and of other observers, who find syphilitic changes in the circulatory organs in 4 to 7 per cent. of all autopsies.

So much for statistics as to the frequency of cardiovascular syphilis; it surely is an important member of the several types of heart disease. How is it diagnosed?

The first essential in the diagnosis of syphilis of the heart and aorta is that it be given a place among the various diagnoses to be considered in any patient in whom heart disease is deemed to be present. An illustration of a neglect of this has been pointed out by B. W. Fontaine[4] who found that not a single diagnosis of cardiovascular syphilis appeared in the records at the Memphis General Hospital which has a large number of negro patients, in whom it is notorious that syphilis is prevalent. The explanation for this, in which one will readily agree with Fontaine, is that heart disease, due to syphilis, was present, but was listed under other diagnoses.

The above is a further argument for the necessity, in all patients in whom a diagnosis of heart disease is made, that the physician should also strive to determine its type, *i.e.*, rheumatic, arteriosclerotic, syphilitic, etc. The clinician should no longer be satisfied with such incomplete diagnoses as aortic insufficiency, mitral stenosis, auricular fibrillation, etc. Far too many diagnoses of "myocarditis" are made; many of these are cases of cardiovascular syphilis, of which the myocardial changes are only one feature.

---

*Read in part before the Boston Association of Cardiac Clinics, November 16, 1922.

Every case affected by syphilis is a case of potential heart disease, *i.e.*, cardiovascular syphilis. The introduction of the term, potential heart disease, as applicable to the heart of those who are or have been ill with the rheumatic type of infections, especialy rheumatic fever, chorea and tonsillitis, has been of value in emphasizing the need of watching such patients for the appearance of rheumatic heart disease; the conception is equally apropos to syphilis.

One should consider syphilis in any case of cardiovascular degeneration of obscure origin. The onset is commonly insidious and the patient states that he was "well until recently." The previous occurrence of the primary lesion of syphilis is more frequently denied than not. Emphasis has been given to the marital history; if there are a number of healthy children syphilis is considered unlikely, and probable if there is a history of miscarriages.[5] However, so many exceptions to the above are met that I have grown to consider these data of limited value. On this point a recent report by Cruickshank[6] is of interest. He found in his series of cases that if abortion and stillbirth were grouped together, the incidence of the combined group showed little difference in syphilitic mothers as compared with non-syphilitic mothers (22.58 per cent. and 24.94 per cent., respectively). The general physical examination should contain a search for evidence of syphilis, such as thickening of the periosteum of the long bones, enlarged glands, suggestive scars, skin and eye lesions, etc.

Arteriosclerosis has sometimes been said to be a disease without symptoms until complications are present; cardiovascular syphilis is somewhat analogous. In 1919 I studied a series[7] of sixty-one out-patient cases and found substernal pain or shortness of breath in all, but in about one-fourth of later series[8] of fifty-four cases, in which the condition was found at autopsy, the disease was but slightly advanced and essentially symptomless.

If there be symptoms, pain is prominent. It varies from a sense of tightness or burning about the upper sternum to the utter torture of severe angina. It may come in attacks, be associated with exertion, or be present almost continuously. In location and radiation the pain is wont to resemble that of angina pectoris.

Shortness of breath is common. It may be associated with rapid heart action and other evidence of cardiac embarrassment. Cough and weakness are further symptoms.

An irregular fever is of exceptional occurrence, but is of little diagnostic value as it is rare that the fever cannot be explained by the presence of some other condition.

In advanced cases symptoms consistent with a high degree of heart failure will be in evidence. If an aneurysm has developed, cough, sometimes brassy in type, hoarseness, and various symptoms due to pressure on surrounding structures, may be present.

Physical signs.—The evidence of luetic infection of the heart and aorta varies according to the nature and extent of the lesion present. In many cases physical signs may be essentially absent.

The physical examination may show enlargement of the heart, particularly downward and to the left. Percussion over the great vessels, a part of the physical examination that is too frequently neglected, often discloses an abnormal area of dulness. The supracardiac dulness is most marked in the midmanubrial region and commonly the dulness is greater to the right than to the left.

Murmurs are often detected. The most frequent is a systolic murmur audible over the base of the heart and transmitted to the carotid artery. This murmur is often very faint and soft, but sometimes loud and rough; it is occasionally accompanied by a thrill, not necessarily indicating a stenotic change in the aortic orifice. If the luetic process has caused an insufficiency of the aortic valve, the characteristic diastolic murmur of aortic regurgitation will be heard. This, of course, may or may not mask the second sound. At the apex a systolic murmur, due to an insufficiency of the mitral valve and of muscular origin, is commonly present in addition to the basal murmurs. And in some cases, the Austin Flint murmur at the apex may be a further finding.

A friction rub audible over the base of the heart is of exceptional occurrence; I have noted it but a few times.

The second sound at the second right costal cartilage often is of a duller tone than normal, but practically the same change may be noted in arteriosclerosis.

Partial or complete heart-block, resulting from myocardial lesions, is particularly prone to occur. Auricular fibrillation or other arrhythmia may obtain.

Contrary to the belief of some there is nothing characteristic in the blood pressure in cardiovascular syphilis. If aortic regurgitation is present as a complication, the low diastolic pressure of the Corrigan pulse is usually present. In but two of the series[9] of fifty-four cases proven at autopsy was hypertension found, and in each of these there was evidence of renal and arterial change of the type found in hypertensive heart disease.

The Wassermann test is indicated in all cases in which the diagnosis of syphilis of the heart and aorta is suspected. If the reaction is positive it adds strong support to the diagnosis of lues, but the converse can hardly be said to be true. There were seven, or 25 per cent., full negative results in the twenty-seven Wassermann tests performed on cases proven shortly after at autopsy, to have definite cardiovascular syphilis. In my experience it is common to find cases in which the first Wassermann test is negative and at a later time, perhaps only a few weeks, the reaction may be strongly positive.

S. A. Levine in his careful review[10] of one hundred and three cases of angina pectoris makes some statements which I feel should not go unchallenged. In discussing the determination of syphilis in the etiology of his cases he states, "In general, however, the Wassermann reaction of the blood will come as near the truth as any other means we have, and can fairly be used for the purpose of this study." And in the same paper Levine writes, "It is my personal judgment, although this point is disputed by some observers, that the introduction of the Wassermann test has taught us that syphilis of the heart is comparatively rare in clinical medicine except when the disease has involved the aorta or aortic cusps; *i.e.*, in the absence of aortic insufficiency and aneurysm of the aorta." The obvious answer to this latter statement is that the syphilitic process must be at work before it has produced enough damage to cause insufficiency of the aortic valve or an aneurysmal change in the aorta, and it is just this early stage that is in such need of recognition and treatment. My first study of a series[11] of cases of cardiovascular syphilis, in which I either saw the patients, or had their medical records covering frequently a period of years, has stamped indelibly on my mind the progressive nature of this disease. Case after case showed first nothing abnormal in the cardiac findings, later a systolic murmur appeared at the aortic area, and after a period of a few months to about a year, the murmur of aortic regurgitation and often that of a mitral leak and advanced heart failure developed.

It is my belief that Levine, in his otherwise excellent paper, has overstated the value of the Wassermann reaction. I repeat that I have often found it negative, sometimes becoming positive later on, in cases of cardiovascular syphilis proven by the necropsy. In suspected cases the test should be repeated after an interval.

At least, such cases should not fail of the definite classification, preferably in writing, of "Cause undetermined" or "Type undetermined," which will leave a feeling of incompleteness and stimulate further study.

Roentgen examination offers further data by which to check the diagnosis. It is inconsistent with our knowledge of the pathology of cardiovascular syphilis to expect that evidence of its presence can be obtained in early cases by the radiographic findings. But in the more advanced cases, particularly when the aorta has undergone alteration in size and contour, the X-ray often produces very definite findings.

The radiologist failed, however, in three of the second series[12] of cases, referred to above, in which the syphilitic changes were of advanced degree.

A marked prominence of the aortic shadow to the right, just above the outline of the right auricle, is almost always due to syphilitic changes in the ascending aorta, a favorite localization of the process. A general enlargement of the shadow of the aorta may occur but must be distinguished from changes associated with a number of non-syphilitic conditions. An aneurysm, if present, is usually detected on radiographic examination. If the width of the great vessels, obtained by Roentgen mensuration, is more than one-half that of the heart, syphilitic invasion of the aorta is almost certain. The heart often shows enlargement particularly in its long diameter.

It will readily be seen from what has been said[13] above that when the syphilitic process is advanced the diagnosis may often be simple, but in the early cases,—and these are of the highest importance, as then it is that the institution of efficient antisyphilitic therapy offers the best chance of arresting the process before the heart and aorta are irreparably damaged,—in these early cases it often happens that only a tentative diagnosis is possible. In this position the diagnosis may remain until the results of the therapeutic test for syphilis have been observed.

A failure to diagnose syphilis of the heart and aorta in its early stages results in a situation not unlike that of a delayed diagnosis of carcinoma. It is far wiser to make a presumptive diagnosis, if a review of all the findings suggests syphilis as the cause of the abnormal heart findings, and to resort to the therapeutic test. Unwillingness to do this may lead to fewer mistaken diagnoses but at times may prove disastrous to the patient. A decision against syphilis often means that there is little to do in the way of treatment to check further degeneration of the heart and aorta; a mistake in the diagnosis, if syphilis be present, may result in another death certificate to sign in the not too distant future. I feel strongly that the responsibility of the physician is very real; when there is any real doubt let us give the patient a chance, *i.e.*, a resort to a course of antisyphilitic therapy.

The therapeutic test consists preferably of four to six injections of arsphenamine at weekly intervals, followed by a course of seven to eight intramuscular injections of a mercurial salt. Of less value, but for certain reasons sometimes employed, is the oral administration of hydrarg. cum creta 0.06 to 0.12 gm. (gr. i to ii) t.i.d., with 0.3 to 1.2 gm. (gr. v to xx) of potassium iodide t.i.d. for about six weeks.

Differential Diagnosis.—The presence of cardiovascular syphilis is the more likely if other conditions can be excluded as the cause of the abnormal signs and symptoms in the heart and aorta. Consequently the differential diagnosis will be briefly considered.

Non-specific aortitis occurs[14] in rheumatic fever, influenza, septic heart disease, anthrax, erysipelas, smallpox, typhoid fever, diphtheria, measles, scarlet fever, pneumonia, malaria, tuberculosis and gonorrhea. It is relatively rare, often symptomless, and usually overlooked. Even small aneurysms and perforations may occur. It is perhaps enough to realize the existence of these non-syphilitic infections of the aorta, and in case of aortitis, occurring after one of the above infections, the possibility of its nonsyphilitic origin should be considered.

Arteriosclerosis is often combined with syphilis in elderly patients. Pure atheroma rarely causes insufficiency of the aortic valve and practically never leads to the formation of an aneurysm. Pain is present in but a small minority of the arteriosclerotic cases. The gross pathologic findings differ, particularly in that there are fatty and calcareous changes as contrasted to the fibrosis of syphilis. The Roentgen findings of the aorta show no bulging to the right of the ascending aorta, and less dilatation of the arch but rather a lengthening of the same with a prominence of the knob to the left.

Hypertensive heart disease also causes enlargement of the heart and some dilatation of the aorta, but may be dismissed with the comment that neither high blood pressure nor evidence of impaired renal function form part of the picture of cardiovascular syphilis.

Rheumatic heart disease at times must be considered. This is especially true if, in addition to the findings of aortic insufficiency, there is an apical murmur which may be explained either as that described by Austin Flint, or as that of true mitral stenosis. Organic change of the mitral valve is probably never syphilitic and if present the insufficiency of the aortic valve may then also be of rheumatic origin. Evidence of enlargement of the left auricle and the electrocardiographic findings of mitral stenosis (high P wave and preponderance of the right ventricle) indicate the latter condition. True mitral stenosis, furthermore, tends to distinctly lessen the Corrigan quality of the pulse. The history is often of assistance; "apparently well until recently" and the absence of the story of an infection which might cause rheumatic heart disease, is not the history of a rheumatic heart. Nevertheless there are cases in which a distinct doubt must remain. Resort to the therapeutic test of antisyphilitic treatment is then justified.

Cases in a sanatorium for pulmonary tuberculosis have not infrequently first been correctly diagnosed cardiovascular syphilis, as a result of radiographic examination.

Mediastinal tumors may at times offer some difficulty in differentiation. A careful study, with a consideration of the data present, and especially the x-ray findings, will almost always enable the correct diagnosis to be made.

Tabes dorsalis hardly needs differentiation save as regards the so-called cardiac crises in tabetic patients. As syphilitic infection of the heart and aorta is very common in the victims of tabes dorsalis, the practical importance of separating the cardiac crises in tabes from the anginal attacks of cardiovascular syphilis, if they be not one and the same condition, is much lessened.

Summary and Conclusions.—The first essential in the diagnosis of cardiovascular syphilis is that it be given a place among the various diagnoses to be considered in any patient in whom heart disease is deemed to be present.

It is helpful to adopt the habit of striving to diagnose the type of heart disease, in which the etiology is expressed whenever known.

Every case affected by syphilis is a case of potential heart disease, *i.e.*, cardiovascular syphilis.

Syphilis should be considered in every case of heart disease of obscure origin.

The history of a chancre is commonly denied.

Too much reliance must not be placed upon the marital history, as regards miscarriages, stillbirths, or living children.

The general examination should include a search for evidence of syphilis elsewhere in the body.

Cardiovascular syphilis may be symptomless unless complications have ensued.

If there be symptoms, pain and shortness of breath, both located by the patient as under the upper sternum, are the most typical. The pain is wont to show a radiation similar to that occurring in angina pectoris.

The physical signs vary according to the nature and extent of the lesions present.

Enlargement downward and to the left, and an abnormal supracardiac dulness are common.

The most frequent murmur is a systolic one at the aortic area.

The aortic second sound is often of a duller tone as in arteriosclerosis.

There is nothing characteristic in the blood pressure findings. Unless the complication of aortic insufficiency has ensued, the blood pressure is within normal limits.

A positive Wassermann reaction is of value in supporting the diagnosis, but a negative report is often received and should not be allowed to shake the diagnosis of cardiovascular syphilis if sufficient other data point to the presence of that disease.

The Roentgen findings are often of great value, but it is inconsistent with our knowledge of the pathology of the disease to expect that the x-ray will detect all of the early cases.

In advanced cases the diagnosis is usually simple, but in the early cases it often happens that only a tentative diagnosis can be made.

The therapeutic test for syphilis is of distinct value in doubtful cases, and resort to this should be made more frequently.

The diagnosis of cardiovascular syphilis is much strengthened by the careful exclusion of other conditions which may account for the signs and symptoms present. The chief conditions to be differentiated are: nonspecific aortitis, arteriosclerosis, hypertensive heart disease, rheumatic heart disease, pulmonary tuberculosis, mediastinal tumors, and tabes dorsalis.

There is no one point on which the diagnosis of syphilis of the heart and aorta is to be made, but each suspected case requires careful attention to the history, especially to symptoms and physical signs, and is to be checked by Roentgen examination, Wassermann test, and often also by observation of the results of a short course of antisyphilitic therapy.

REFERENCES.

1 Unpublished.
2 Nelson Loose Leaf Living Medicine, 1920, iv, 533.
3 Reid, W. D.: (1) Prognosis of Specific Aortitis, Jour. Am. Med. Assn., Dec. 13, 1919, 73:1832. (2) Specific Aortitis, Boston Med. and Surg. Jour., clxxxiii, 3:67 (July 15, 1920); clxxxiii, 4; 105 (July 22, 1920).
4 South. Med. Jour., 1918, ii, 278.
5 In the discussion, Dr. Morton Smith brought out that the time of the miscarriage is important. In syphilis (except in the initial stages) the miscarriage is practically always in the fifth month or later, and if the history is obtained as to the period of the pregnancy, such accidents in the later months still possess value in the diagnosis of syphilis.
6 Syphilis as Cause of Antenatal Death. Brit. Med. Jour., 2, 3221:593, Sept. 22, 1922.
7 See reference 3 (1), above.
8 See reference 3 (2), above.
9 See reference 3 (2), above.
10 Angina Pectoris, Jour. Am. Med. Assn., Sept. 16, 1922, 79, 12:928.
11 See reference 3 (1), above.
12 See reference 3 (2), above.
13 The signs and symptoms have been somewhat more fully considered in earlier papers.' See reference 3 (2), above, and reference 14, below.
14 Reid, W. D.: Cardiovascular Syphilis. Med. Clinics of No. Amer., 5, 5:1319, March, 1922.

DISCUSSION.

Dr. William David Smith in commenting on the treatment of cardiovascular syphilis made a plea for preliminary treatment with mercury and potassium iodide, delaying administration of diarsenol until the patients had become more or less saturated with these two drugs. He felt that there was a very definite danger in starting treatment with arsenical preparations. In regard to the matter of prognosis he felt that there were no reliable prognostic criteria. This statement was generally agreed to and five or six years were set as the most hopeful prognosis for life in these cases.

Dr. C. Morton Smith in commenting on Dr. Reid's paper expressed the opinion that the period of miscarriage was of definitely more significance than the number of miscarriages, saying that those occurring repeatedly between the fifth and ninth month made him suspicious of a syphilitic background. He advocated the routine taking of blood for the Wassermann reaction just as urinalysis is now routine, because if the foundations of late manifestations are laid during the secondary stage it is during this stage that antisyphilitic treatment should be of most benefit.

Dr. Samuel Levine put the following question to the meeting: "What is the consensus of opinion as to the occurrence of syphilitic myocarditis without other vascular changes due to syphilis?" No one had any specific opinion as to the frequency of such occurrences, but the general feeling among the men was that uncomplicated syphilitic myocarditis was rare.

Dr. Paul White in closing the meeting expressed discouragement with the present status of treatment of cardiovascular syphilis, and urged that all efforts be made to make early diagnosis of syphilis, advocating with Dr. Smith routine blood Wassermann reactions for all patients seen in the medical outpatient departments.

◆

THE VIEWPOINT OF A PHYSICIAN.

BY JOHN H. NICHOLS, M.D., TEWKSBURY, MASS.

Proposed Bill of Amendments to Chapters 13 and 112 of the General Laws Relative to the Registration of Nurses and Advocated by the Massachusetts Nursing Association.

Discussion at a special meeting of the Nursing Association with the Superintendents of various Massachusetts hospitals, at 585 Boylston Street, Boston, Mass., Friday, January 5, 1923, at 3 P. M.

I find that I am opposed to all the proposed amendments and realize that my opinions might be more wisely reserved until the legislative hearing, but this opposition is to the proposed bill and not to the Nursing Association. I am not opposed to the Nursing Association, the nurses, or to nursing interests, and so I am willing to talk with you now and hope that I can make you feel as I do, so that not so many of you will wish to urge this bill, that you will make no further haste to go from present conditions to something worse, but let good enough alone and be content to let this matter rest for a while longer.

Although speaking as superintendent of a hospital with one of the oldest training schools in the state and deeply interested in everything that is for the improvement in the nursing of the sick, I wish mostly to speak as a physician familiar with conditions in the suburban medical districts north of Boston. Of course, I realize that conditions may be very different here within the city.

From the early days of the training schools up to 1910 wonderful progress was made in the art of nursing, and no profession seemed to be held in greater reverence, or nothing received more popular and earnest consideration than matters pertaining to nurses and to the training schools. It is now twelve years since registration laws were enacted. During that time the requirements of the training schools have steadily advanced and the standards raised. More and more hours have been required in the class room and fewer and fewer hours at the bedside, until the pupil nurse has often learned to like the class room better than the bedside. An education has taken the place of the former training, a profession the place of a calling, and the former charges of $21.00 per week have advanced to $25.00, to $30.00, to $35.00 and to $42.00 per week, but families that can afford it have been unable to procure nurses out in the suburban districts during the last few years. Registered nurses are not obtainable. They seem to nearly all have become general managers in hospitals, industrial establishments, educational departments and public welfare activities.

If twelve years of registration has resulted almost in elimination of the graduate nurse from suburban communities, let us be careful lest we should lose the nursing attendants by licensing them. Nursing attendants or nurses unregistered are just beginning to save the situation today and will be preferred to their unobtainable sisters, and they will command all of the popular interest and kindly consideration to which the nurses have been accustomed; they will fill the void where the graduate nurse gives out.

I do not believe the yearly fee for registration is a good thing. We must be continually losing nurses by neglect or indifference in regard to payment of the annual fee who would otherwise be available in emergencies, when changes in family conditions and responsibilities (of married life), or release from employment in other lines of work might allow their reëmployment as nurses. A sufficient fee in the beginning should suffice to make one who is once a registered nurse always a nurse.

I would not have you urge an educational director at a salary of $2500 per year for the presumable purpose of further raising the standards and requirements which already leave us an insufficient supply of nurses.

Do not join in the mad rush to standardize everything and turn out nurses as from a stamping machine, but leave, in our training schools at least, a chance for individuality. Do you want or need the educational director in the three or four famous hospitals here in Boston, or do you want the educational director for the other hospitals that cannot claim so much distinction, or is this the beginning of a purpose to bar out the other training schools from registering nurses and to only allow them to graduate attendants? Of course, if this should be so we must oppose you at the hearing. We should be guided by what is of importance in our own state regardless of New York, Pennsylvania, Illinois and the other states. Perhaps the other states would be glad to follow us rather than to continue the high standards with resulting famine of nurses. They are waiving some of their requirements in New York already. I believe in having our most noted hospitals give a training or education as far as they desire, but not require all the other schools to follow them up to the heights. If A.B.'s, M.A.'s and Ph.D.'s or anything else in nursing are desired in some of the schools I think it is right to make it possible for these things to be obtained, and those obtaining such degrees or high standards would be in great demand as instructors, as superintendents of institutions, principals of training schools and for many of the highest positions, but we should not make these high attainments necessary for registration, for to many of those educated to the higher levels we would not expect that bedside nursing would any longer be pleasing or attractive, while those who have progressed only through the shorter courses are willing and enjoy the bedside work. They might be registered for the directly humane rather than for the administrative part of the work. Do not call them attendants; call them nurses. We want nurses to care for our sick.

During the war very short courses of instruction in nursing were given by the Red Cross, and many so-called society women and women of prominence availed themselves of the opportunities and were allowed to fill important places in the nursing work; and my attention has been called to no serious results attendant upon this emergency policy, therefore I feel that less exacting requirements for registration than now obtain might yet be adequate. Let us advocate the minimum requirements of this last year for admission to training school: if they further raise the standards it will tend to diminish rather than increase the supply of available nurses for the sick.

Social service training qualifies women for general welfare work, for making studies, reports and tabulations, but does not qualify them as nurses. It might be well if much of this welfare work which is done by nurses should be left to social service workers, for it is desirable that a larger number of nurses should continue in the private duty service.

I would not separate the Board of Registration for Nurses from the Board of Registration in Medicine. The principle is wrong. I am out of sympathy with anything that usurps the leadership of the physician in everything relating to the sick. If nurses wish to take six, eight or ten years in preparation they can become physicians and take the lead, but anything that minimizes the leadership or authority of the physician or the hospital in relation with the sick and exalts the training school and nurses above the hospital and the physician is a serious mistake.

I do not believe in reducing the medical representation on the Board from two physicians and three registered nurses to one physician and four registered nurses. I think it would be better to have three physicians and two nurses, and that the third physician should represent the physicians in private practice who are the ones that have such desperate need for the services of the nurses. There are many people who do not go to hospitals, and the home is sitll the place most dear to the heart of those who are sick.

Lastly, it does not seem probable that the Legislature would enact law unfavorable to the state hospitals and their training schools, that are caring for somewhere near 22,000 people.

The special purpose of my remarks is to emphasize that we should keep close to first principles, that in medical and nursing matters we should dispense as far as possible with politics, legislation, things militant, striving for advantages or class preferment, and just think and aim for those things that will give the greatest immediate help and comfort to our suffering patients.

We cannot all agree on a diversity of matters, but on this one point nurses and physicians must surely be on common ground, and on that ground we will have everybody else with us.

I had hoped that this participation would not be required of me, but, when called, felt that it was important to urge my views, hoping that some of you, or many of you, or that all of you might come to view these matters to some extent as I do.

THE PHYSIOLOGY OF "AUTOSUGGESTION."*

BY DONALD GREGG, M.D., WELLESLEY, MASS.

At this time when "autosuggestion" is receiving wide publicity, consideration of the subject may well be taken by the physician as well as by the layman. To attempt to dismiss the matter by pointing out that the most recently widely advertised exponent of the subject—Coué—is not a doctor at all but a pharmacist, does not influence many, nor does laughing the matter out of court with the tale of the bow-legged man who said, "Every day in every way I am getting better and better" three hundred times instead of the prescribed two hundred, and woke up the next morning to find himself knock-kneed; or the tale of the straight-haired woman who repeated the formula too often and had to use ten bottles of anti-kink to make herself presentable again. The layman continues to say, "But there is something in it just the same."

Suggestion implies the passing of an idea from one to another. "Autosuggestion" implies the passing of an idea from one to oneself. Autosuggestion demands a duality, which the present-day advocate of the subject supplies by his conception of "the conscious" and "the unconscious." Without "the unconscious" or its equivalent autosuggestion becomes impossible.

What then do we mean by "the unconscious" which appears repeatedly in Dr. Coué's writings and about which his theories are grouped? Dr. Morton Prince, whose book on "The Subconscious" popularized the term, has said that there is no such thing as "the subconscious" as distinguished from "the conscious." Unfortunately we gain little in the way of definition of the unconscious from Dr. Coué's book. He speaks of two absolutely distinct selves—a conscious and unconscious. In proof of the unconscious, he mentions somnambulism, delirious conduct, unconscious memory and control of the autonomic nervous system. Of somnambulism we know little save that it is a symptom of an abnormal rather than a normal mentality. Few will consider delirious conduct as more than the reaction of an individual to pathological stimuli. Unconscious memory becomes conscious when inhibiting thought is removed or through the proper association of ideas. Few will question the statement that the mind is a storehouse of impressions. Many of these impressions are properly catalogued and indexed, and can be referred to by the use of memory, provided we use the proper index or association of ideas. Others seemingly are lost and cannot be located with the aid of our usual index. Perhaps a letter from John Smith cannot be found under the S's because we filed it in the J's under John, or thinking of John Brown at the time, we filed it with the B's. But because we have memories that cannot be recalled and memories that are mislaid, does not justify the conclusion that we have two distinct sets of memories. Many a letter in a file is temporarily lost because we do not know how to find it, not because it is in a different filing case.

As for control of the autonomic system, we are guessing when we delegate this function to the unconscious, and disregard the knowledge that we have gained of the part played by the emotions in modifying through the glands of internal secretion the activities of the viscera.

Further on in his booklet, Coué speaks of the will and the imagination, and cites examples of the control of the will by the imagination. In each example the element of fear enters. And when he states that "our imagination holds all the strings" and "We only cease to be puppets when we learn to guide our imagination," he presumably means that our intellects avail us little unless our emotions are under control.

Most of Coué's thesis regarding self-mastery centers about the control of physical functions through conscious suggestions that are thought to be absorbed by the unconscious, which, in turn, controls the bodily functions, and produce health or disease. Such a thesis, if tenable, should be applicable in sickness and health, in infancy and old age, and in the past as well as in the present development of man.

---

*Read at the October meeting of the Boston Society of Psychiatry and Neurology.

What becomes of the unconscious in mental disease? At what age does it begin to develop, and when in man's development did he acquire an unconscious self? Here we go off into deep waters.

On the other hand, if we simply regard the body as a mechanism which automatically runs along healthily in the great majority of cases unless interfered with by noxious agents from without, or unless its activities are handicapped by malformations or maldevelopments, or its functions inhibited by the emotions, have we not an unassailable thesis?

In mental disease the emotions are not aroused or if aroused are often superficial and fail to react on the autonomic system. Hence the excellent health of many mental cases under good hygienic conditions. In infancy and old age the emotions again are usually slight or fail to react on the body. The individual of low-grade mentality, like an animal, is often a fine physical specimen, and immune to nervous upsets, so called, because his emotional activities are superficial.

Instead then of using terms that are obscure and in dispute, such as the conscious and unconscious, why not consider the intellect and the emotions? Here we have terms dealing with concrete and undisputed subjects. The intellect deals with material facts and objects—not sensations. Remembering, drawing deductions, evolving reasons for the happenings in this world, directing our conduct to accomplishing a remote, rather than an immediate end, are functions of the intellect. The emotions, on the other hand, are dependent upon sensations, or memory of sensations, and are variable, and often fleeting and capable of multitudinous changes. When rightly used they supply our driving force in conduct to a large degree, but if they are allowed to preside at the steering wheel often land us in the ditch.

In development, we are first of all sensori-motor mechanisms, and are governed solely by our sensations and instincts. Later we develop intellects which act through memory of our experiences, in a manner primarily inhibitory of our emotional reactions. We learn to eat at stated intervals, to avoid the discomforts of wet clothes, to avoid what we dislike, to gain what we want, etc. The duality of our nature is a duality of intellect and emotions, not of conscious and unconscious. Our lives are thus not simple, but most complex, for at times our intellects, under which are grouped our memories and experiences, and less definitely our ideals, standards, and morals, direct us; and at other times our emotions, roused by our pains, worries and environmental stresses, and exhibited in the form of fears, with their accompanying physical changes and signs, lead us on.

For ages we have realized the power of the mind over the body, and comparatively lately we have demonstrated a part of the physiology of this phenomenon. What is needed today is careful study of the emotional life, from the physiological standpoint. What is the basis for emotional variability in different individuals, and in the same individual from time to time? Is it due to varying sensitiveness to stimuli, or to a summation of stimuli? What part does the conditioned reflex play in the reaction to emotional stimuli? Already we recognize that the emotions act directly or through the glands of internal secretion upon the vegetative activities of our bodies, and modify our pulse rate, circulation, gastro-intestinal activity, metabolism, etc., preparing our bodies for fighting or fleeing, while our intellects control our voluntary muscles, and but rarely and very indirectly modify our vegetative activities.

Here is the physiological explanation of "autosuggestion," so called. And he who in functional disease heals the sick or helps himself to health, does so, not through the unconscious, but through the action of the emotions. By eliminating the inhibiting or disturbing actions of the emotions in their multifarious forms functional health is often regained, and he who would heal himself or others needs to know the physiology of the emotions, and not the pseudo-psychology of the unconscious.

THE VALUE OF A MEDICAL SOCIETY TO THE COMMUNITY AND TO ITS OWN MEMBERS.[*]

BY DAVID R. LYMAN, M.D., WALLINGFORD, CONN.

Gentlemen of the Hartford Medical Society:

It is indeed an honor to be given a part in the opening of this beautiful new hall of yours, and I can only assure you that there is no one who could more highly esteem that privilege.

From the time when I first came a stranger within your gates, I have many pleasant memories of evenings of kindly intercourse beneath this hospitable roof, and in all the splendor of its new beauty and comfort I can wish your home no higher gift than that the spirit of brotherhood and scientific fellowship which was nurtured here of old may be but perpetuated and intensified throughout the years. I so well remember in my first year in Wallingford an evening at the New Haven Medical Society, where I had been invited to take part in a discussion of the tuberculosis problem. It seemed to me that the members hastened through their scientific program in order to reach a prolonged and animated discussion of the proposal to provide a home for their society.

In my youth and enthusiasm and inexperience I counted this a strange waste of time, when the most important question then before the medical profession was under discussion. Looking back I now see clearly that although the most important question to the New Haven profession *was* indeed under discussion it was *I* who had failed to recognize it. Nothing is so essential to a medical society as a home, even as nothing is so essential both to the practitioner of medicine and to the people under his care as a society in which we come together to discuss the many problems of our profession.

---

[*] Read before the Hartford Medical Society.

And so it is my privilege tonight to try to sum up for your consideration the benefits which such a society as yours inevitably brings to its community and to its own members.

With our papers full of accounts of the League for Medical Freedom, with antivaccinationists and antivivisectionists and antis of almost everything that bears the stamp of medical approval constantly coming to the fore, there could hardly be a better time or place for the consideration of this subject.

Indeed the attitude of a large minority of the people towards our profession is often difficult to understand, though it is probably due principally to two causes. First, our attitude toward our patients is still too largely that of a few centuries ago. We are still too greatly given to treating our patients as children incapable of grasping our reasons for this or that procedure and with whom a little knowledge might indeed prove a dangerous thing. We continue to prescribe ordinary household remedies under their Latin names and to resent being asked our reasons for any procedure, demanding rather the unquestioning obedience one requires of a child. We have overlooked the fact that the public of today is very different from that of three centuries or even one century ago. The tremendous growth of general education, especially in this country, with the teaching of the basic principles of physics and hygiene and chemistry in our public schools, has rendered our average patients of intelligence thoroughly capable of being taken into our confidence in many matters—in fact often being thus rendered better able to give us much needed coöperation, and they resent an attitude which apparently classes them as children. The founders of the many new cults now flourishing among us have been quick to sense this and have won the allegiance of their patients, intelligent and ignorant alike, by apparently taking them into their confidence. A similar attitude on our part would prevent many of those under our care from seeking after false gods!

The other cause of hostility is that we have constituted ourselves, and rightly, the guardians of the public health. We have found it necessary, especially in matters of general hygiene and contagious diseases, to impose upon the people regulations based on the sum of our professional experience, but which are always tending to limit the freedom of action of the individual. This, in common with all constituted authority, arouses inevitable resentment, which only lessens slowly with the spread of public education.

But in spite of any and all causes which tend to irritate people against us, one would think that the wonderful record of the unselfish services of our profession to mankind would at least place us beyond suspicion as to the integrity of our motives. Consider, for example, the question of smallpox, and try to visualize, if you can, the value of our services to our fellowman since Jenner first presented his work to the Royal Society of London in 1798. We have just witnessed a serious outbreak of this malady in our state, and the emergency found our profession, as usual, giving its services gratis whenever and wherever required so that we might minimize the loss and suffering to our people; and, as usual, our chosen ward, the public, has either accepted these services as being its just due or else has joined in with that loud but ill-balanced minority which, blind to all the lessons of history or too ignorant to appreciate their meaning, rails at us for attempting through vaccination to spread disease, to the betterment of our individual practices!

Strange is it not that a brotherhood with such a record as ours of generations of unselfish service should have to meet with this attitude? What other profession works so against its own material interests, spends so great a portion of its time and energy, devotes so great a percentage of its best brain power to the endeavor to deprive itself of a livelihood?

When our brothers of the law seek to aid the progress of humanity by the promulgation of new laws or the recoding of old, they do but increase the need for their own services in the interpretation and application of these. When we, on the other hand, delve into the laws of biology or chemistry or physics, our main object is to find a means of prevention of those very phenomena of human existence to the care of which we must look to earn our daily bread. What wonder that a conscious pride in our art holds us steadfast to the unselfish creed of service which binds our brotherhood!

In attempting to enumerate the services of our medical societies to their respective communities, I would put first in importance their function of singling out those men who are worthy of the trust that this responsibility of service places upon us. No one not of our profession can realize how easy it is for an unscrupulous doctor to impose upon a credulous public, or how great the need of the human physician for a basic moral courage that will carry him through the stress and the temptations that surround his daily life, with no breath of harm either to those under his charge or to himself. I sometimes fear that with our great sympathy for human frailty as it is daily presented to us, we are often too lenient with our own members. True, it is difficult to revoke a membership unless our action can stand the test of legal procedure, but there is a quaint Eastern proverb which says "When in your neighbor's melon patch don't tie your shoe," and we should in some way see to it that no man who cannot avoid suspicion as to his integrity to the ideals of our profession shall bear that stamp of professional approval which membership in our societies carries with it.

Second in value to the public, I would put the protection our societies furnish against the countless plausible frauds put forward to fatten on the instinctive yearning for health which is shared in common by all chronic sufferers. Strange, is it not, how people, otherwise sane, can be so easily taken in by the veriest faker who has at his command a little high sounding medical phraseology! Recently a well educated patient sent me a copy of *Pearson's Magazine* with an article on the electronic reactions of Abrams which had greatly impressed her. This worthy, it appears, can take a drop of blood on blotting paper and by testing its electronic vibrations on a naked human, control, diagnose and treat any disease in anybody anywhere. More than this, these vibrations are equally valuable when tested on the handwriting, no matter how old, and we are naïvely told that Samuel Johnson, among many others, was so mentally alert because of the irritations of his brain cells due to congenital syphilis, and that Edgar Allan Poe was a dypsomaniac. Then as if our credulity could not be overtaxed, we are told that the greater number of cases of syphilis which the "doctor" diagnoses are found by him to be of bovine origin, acquired through vaccination. This was one of two certain "cures" for tuberculosis presented to me in that week, each vouched for by successful business men or lawyers of repute who stated and firmly believed that their particular nostrum was an absolute and proven cure which would soon free humanity of this scourge were it not for the jealousy and opposition of our profession. Surely Kipling must have been writing to us when he penned the lines: "If you can bear to hear the truth you've spoken, Twisted by knaves to make a trap for fools." There is always a legion of the unscrupulous preying upon the public with so-called "medical" discoveries whose basic falsehood is camouflaged in a mass of distorted facts and half truths, and against these almost the sole defense of the public lies in the combined resources of our societies for the study and exposure of these frauds.

Next in order I would put the function of our societies as providing an acid test for new medical and surgical procedures. Many is the man who has prided himself on some great advance in medicine or surgery because of an apparent success with one or two cases, only to learn on discussion in his medical society that the experiences of others indicated that he must modify or abandon his ideas or else do harm. It is interesting to note in this regard that Jenner's request for permission to present his work to the London Royal Society in 1798 was met with the advice from its president that he "should be cautious and prudent, that he had already gained some credit by his communications to the Royal Society, and ought not to risk his reputation by presenting to the learned body anything which appeared so much at variance with established knowledge, and withal so incredible." He fortunately persevered, but the conservatism of our societies has protected the public against the unbalanced experimentation of many would-be Jenners.

Another very evident value of our deliberations to the community is in the great aid these interchanges of experience give the practitioner in the handling of his individual cases. For this one thing alone, I feel that every physician and surgeon owes it to his patients to attend all the meetings for which he can possibly find time, for no matter what his specialty, he rarely goes away without new light upon some case under his care.

Our societies also furnish the forum for full and free discussion of all public health measures from a medical standpoint; and again the public benefits from the free interchange of ideas and experiences. The medical officer who would put any new public health measure into operation without first submitting it to this jury of his brethren would indeed be both bold and foolish. In this regard, however, I feel that the procedure of our societies could be improved upon. Bernard Shaw in a recent talk to the doctors of St. Thomas's, London, touched upon this. He attributed the lack of public faith in measures proposed by us to the fact that our councils being composed entirely of physicians, tended toward a narrow-minded medical autocracy, and proposed that medical matters affecting the public should be determined by councils composed of well informed laymen with physicians as advisers.

This is of course absurd, but there is much in the idea of consulting the well informed laity as to how our public health measures can be shaped so as to stand the test of intelligent public scrutiny. It would be well, I think, if when we are discussing such measures, we took care always to invite interested laymen to participate in our deliberations, both for their own edification as well as ours. This brings me to the last and by no means the least benefit which our societies can bring to their communities, though at present a service very largely neglected by us. I refer to the function of keeping the members of our profession in touch with the leading public issues and alive to their duties as citizens. As a profession, we are, I fear, inclined to neglect these duties. The world, our chosen professional world, "is too much with us"; we are too prone to leave the consideration of statecraft, finance and social policies out of our scheme of things. We take too little part in the councils of our town, county or state. Grover Cleveland, at the fiftieth anniversary of the New York Academy of Medicine, used these words concerning us: "We cannot accuse you of utter neglect of your duty to the country; and yet we cannot keep out of mind the suspicion that if your professional work in exposing evils was more thoroughly supplemented by labor in the field of citizenship, these evils would be more speedily corrected." We do need more of this "labor in the fields of citizenship" in our profession, and I feel that one of the prime functions of our medical societies should be to keep this responsibility alive in us. No other man has in his daily life the opportunity which the physician possesses of influencing public opinion for or against any given issue; yet no other group of men of learning takes so casual an interest in the great issues of the day, or gives expression to so much ill-informed opinion concerning them. Take, for example, the experience of the legislative committee which was considering the all-important question of state health insurance four years ago. Desirous of informing themselves as fully as possible as to the practicability and advisability of any such measure, this committee sent a circular letter to the medical profession of our state asking their opinion concerning it. Surely they must have felt that no body of men could give them so intelligent a criticism of this measure as could the learned profession which would be most vitally affected by its passage! What was the result? Not one physician in ten even answered their circular, and not one in ten of those who did answer did more than simply state his opposition to it. How can we expect our legislators to give proper weight to our advice on matters in which we do take an active interest when they find us apparently so uninformed and uninterested in so vital a problem as health insurance? Should we not from time to time feature special meetings of our societies at which both sides of pressing public questions can be presented for our information? Surely it would increase our value as individual citizens and strengthen our influence in our community!

And now what of the value of a medical society to its members? One might sum it up briefly by saying that they are absolutely invaluable, irreplaceable from any source, and that no practitioner, be he young or old, famous or practically unknown, can afford to pass by the opportunities which they offer for his personal and professional development.

First and most generally recognized of all the benefits our society brings us is the library with its journals. I am especially glad to emphasize that point here in your club, where your well chosen and beautifully arranged collection of medical literature is alike the envy and the admiration of all who visit you. Indeed, the profession of the state owes a debt to your good librarian and those who have aided and abetted him in his unremitting labors for the example you give us, for a well stocked reading room and reference shelves are the surest foundation about which to build a medical society with a home of its own. Its value is too patent even to merit casual reference, for no man can pretend to go forward in his work who does not read, and no man can hope to provide for himself a fraction of what his society offers him. Even though his time for reading be limited, his omissions are in a large part supplied for him if he attend the discussions of our scientific meetings, for he will find that his fellow members between them will usually bring out in these discussions all that is most worthy of note in recent literature. From these discussions he will go home armed with new points of view with which to tackle this or that puzzling case, and although not entirely relieved of that feeling of hopeless ignorance which comes to us all because of our inability to interpret correctly all the phenomena of disease presenting in our practice, he will have the comforting realization of at least having done his utmost to broaden his professional outlook.

Aside from the great material advantages which our societies provide, there is not one of us, old or young, who can afford to miss the stimulus which this association with others of our brotherhood so surely brings. From whence can the young practitioner draw such a store of faith in the ultimate end of his chosen calling or such consolation for the trials along his path as by personal contact here with the beloved elder members of our profession, whose very presence says to him in the words of Rabbi Ben Ezra:

Grow old along with me.
  The best is yet to be.
The last of life for which the
  First was made.

Our times are in His hand
  Who says "A whole I planned.
Youth shows but half, trust God,
  See all, nor be afraid!"

The history of our profession is the inspiring record of the greatest of all arts whose basic motive is the principle of unselfish service of our fellow man; a brotherhood which has put ideals before all else, regarding them as Dr. Samuel Gilbert so fittingly said in his presidential address before our state society as "the stepping stones by which all men who have attained true success have found their way." It is indeed a pity that our programs do not more often contain biographical sketches of those who have followed those stepping stones to the high pinnacles of success, from which their names stand out among the chosen few who have left their lasting influence on the health and happiness of their race. What can fire the dreams and ambitions of the young practitioner so surely as such stories as that of Beaumont starting out from Lebanon in his early youth with a capital of one hundred dollars, a horse and cutter and a barrel of cider to seek his own way, only to pass his name down to us as the great pioneer physiologist of America; or of Trudeau, lying on his bed in his cabin at Paul Smith's camp in the

Adirondack wilderness, listening to the guide admonishing the people outside to silence because he, Dr. Trudeau, had just died, and then living to inspire and direct the great tuberculosis crusade which has been the saving of countless thousands. And think also of the man who, when Trudeau's house was burned along with his laboratory and all the records of his patient researches, could conceive that wonderful message of comfort and inspiration which Osler's telegram brought to his disheartened friend: "Dear Trudeau—There is nothing like a fire to make a man do the Phœnix act." Of all the great men of medicine, none sensed so keenly as did Osler the value of the study of medical history or contributed so greatly to that branch of our literature. We can only hope the stimulus which he brought to us in his lifetime may in part be perpetuated through his biographer.

We have, too, the appreciations of our profession in the writings of the great men of letters. Who of us but gives thanks anew for his chosen lot when he reads Robert Louis Stevenson's tribute:

"He (*i.e.*, the physician) is the flower (such as it is) of civilization, and when that stage of man is done with and only to be marveled at in history, he will be thought to have shared as little as any in the defects of the period, and most notably exhibited the virtues of the race. Generosity he has, such as is possible to those who practice an art; never to those who drive a trade; discretion tested by a hundred secrets; tact tried in a thousand embarrassments, and what is more important, Heraclean cheerfulness and courage so that he brings air and cheer into the sickroom; and often enough, though not so often as he wishes, brings healing."

Ours is indeed a heritage to guard with jealous pride, and it is in our societies where we are brought in touch alike with the great names which have stood out in our history because of their adherence to the ideals of our profession, and with the fellow practitioners of today who command our admiration and affection that we draw our greatest inspiration to hold true to the tenets of our brotherhood—to "follow the gleam."

Finally, it is in the furtherance of this sense of brotherhood that a medical society, especially one which has a home of its own, can be of service to its members. There is, sad to say, no profession so apt to be torn by petty jealousies and misunderstandings as ours. This is but natural, for we deal with fellow human beings in a peculiarly close relationship. The strictly medical part of our associations with our patients is often of small importance as contrasted with our rôle of family friend and counsellor in time of physical or mental need. Nothing cuts so as does the loss of a friendship, and it is this sense of loss coupled with the constant misrepresentation of one physician to another by our patients that tends to make us so open to professional jealousies.

But around our own fireside, where we are all thrown together as one big professional family, we get to know one another, to see the good which so overbalances the petty frailties which we all possess, to talk over our differences face to face, to find a friend where we had almost supposed we had an enemy. This cementing of the bonds of brotherhood is perhaps the greatest benefit which our medical societies bring us, and if I were to choose an inscription for the walls of this beautiful home of yours. I think it would be this:

"All men who fain would pass their days
  Amid old books and quiet ways,
Quaint thoughts and autumn's mellow haze,
  The uses of tranquillity,
The peace you love be with your souls!
  Come! Fill we now our brown pipe bowls
And discourse to the bickering coals
  Of kindness and civility."

To me the outstanding feature of the life of the Hartford Medical Society has always been the air of kindness and civility which has pervaded its scientific discussions and its social intercourse. May it ever continue to grow and spread its influence alike over your members and your guests!

◆

Medical Progress.

PROGRESS IN MEDICINE: RECENT ADVANCES IN THE TREATMENT OF ANEMIA.

BY THOMAS E. BUCKMAN, A.M., M.D., BOSTON.

ALTHOUGH much progress has been made in the past decade in the development of new methods for the study of the blood one views with disappointment the very few advances that have been made in the treatment of the anemias. Indeed, with a few outstanding exceptions, very little that is new can be added to the résumé written by Lee[1] for this JOURNAL in 1914. Much of the work that has been reported in the past few years is discussed in detail in the articles and abstracts that appear in the Oxford System of Medicine and in Nelson's Loose-leaf Living Medicine. Hence, the present report is concerned only with the more recent advances in this field.

PHYSIOLOGY AND TECHNIQUE.

(a) The life history of the red corpuscle.

One of the most far reaching of recent contributions to the physiology of the blood is the work of Drinker, Drinker and Lund,[2] on the circulation in the bone-marrow. These investigators have shown that the delivery of mature red cells to the blood stream, in the absence of marrow disintegration, is controlled by the growth pressure of developing erythrocytes. The stimulus which causes proliferation of red cells causes also the passage of these cells through the delicate wall of the marrow capillaries. Whether or not an increased number of red cells will be delivered to the circulating blood following marrow stimulation depends on the relative fall in pressure level between the red cell forming areas and the adjacent capillaries on the one hand and the areas of developing erythrocytes and the surrounding marrow on the other hand. Thus, after a single large haemorrhage immature red corpuscles appear in the circulation as soon as the growth pressure of the stimulated erythropoietic areas exceeds the pressure of the surrounding marrow, but it is possible that after repeated haemorrhages a stage of adjustment may be reached where immature forms do not appear in the circulating blood following further haemorrhage. Growth pressure has not only forced red cells into the circulation, but also has enlarged the available marrow space. Fat and even bone, perhaps, are absorbed. Further stimulation will result in further growth, but there is more room in which to grow and slight increases of pressure will be taken care of by the passage of water to other places. Therefore, absence of immature erythrocytes in the circulating blood does not mean necessarily an inactive or hypoplastic marrow.

Key[3] explains the absence of immature red corpuscles in the circulating blood of normal individuals by the "stickiness" of these younger forms—a fact demonstrated by him and observed by others. Under ordinary circumstances these sticky cells are not forced into the blood stream because by their adhesion to one another they form masses from which individual cells are not readily disassociated. Immature forms may appear in the blood stream not only after stimulation of the marrow, however, but as shown by Drinker[2] and his associates, even in the case of a normally active marrow provided that the marrow capillaries have disintegrated. In this case, these younger cells are swept into the open circulation. Thus the appearances of young erythrocytes, erythroblasts, reticulated cells, polychromatophilic cells, etc., does not necessarily indicate increased marrow activity, but may be the result of a disintegration of the marrow.

The study of reticulated erythrocytes in the peripheral blood has been greatly facilitated by the improvement in methods of staining them in blood films. Hawes[4] in 1909 described a method of preparing permanent mounts of blood films stained with brilliant cresyl blue and superstained with Wright's stain, and recently Cunningham[5] has revived the method and applied it to the study of the problem of the relation of polychromatophilia to reticulation.

Harrop[6] has shown that reticulated erythrocytes consume oxygen and some of the physical properties of these cells have been studied by Key,[3] who found that the reticulated cells appearing in the circulation after haemorrhage had a lower specific gravity than that of the adult erythrocyte, but showed the same degree of resistance to hypotonic sodium chloride solution.

With the manufacture of a suitable preparation of brilliant cresyl blue in America[7] the counting of reticulated erythrocytes again becomes a clinically possible procedure. Although a knowledge of the percentage of these cells in the peripheral blood is, of course, empirical evidence of much value in the diagnosis of primary aplastic anemia and of hemolytic icterus, and in the prognosis of anemia due to blood loss, one would like to know more about the biological adaptability of reticulated red corpuscles, especially in such conditions as pernicious anemia in which abnormal blood formation is a feature.

Ashby[8] has introduced an interesting method of determining the length of life of transfused red corpuscles, based on transfusing cells of group IV into an individual of unlike group and observing the time that elapses until the disappearance of the transfused cells. With this method she found the length of life of transfused corpuscles to be about thirty-nine days in a normal individual.

The introduction of methods for the study of the rate of elimination of pigment has given a remarkable impetus in recent years to this phase of blood physiology. The method of Sellards and Minot[9] is based on the determination of the quantity of haemoglobin which it is necessary to introduce into the body in order to produce haemoglobinuria. Wilbur and Addis[10] and Hooper and Whipple[11] and others have improved the methods of determining the quantity of bile pigments in the urine and feces and Vander Bergh and Snapper[12] and Blankenhorn[13] have devised methods for the quantitative estimation of bilirubin in the blood serum.

From the standpoint of blood physiology the importance of these methods rests, to a large extent, on the value of the evidence they furnish regarding blood destruction. In the absence of disturbed liver function an increase in the output of bile pigments in duodenal contents, feces or urine, is presumptive evidence of increased blood destruction. Thus Jones and Jones[14] have demonstrated in a case of paroxysmal haemoglobinuria the extrahepatic formation of bile pigments apparently caused by blood destruction following the exposure of an extremity to the cold. Krumbhaar and Chanutin[15] have shown that in animals there is an increased blood destruction, as measured by urobilin excretion, following repeated blood transfusions, and C. M. Jones[37] has studied the elimination of bile pigments in the duodenal contents, especially in anemia due to blood loss and pernicious anemia.

The manner in which blood destruction is accomplished still remains a subject of speculation. Sufficient evidence is not at hand to decide whether the principal mechanism is one of erythrocyte phagocytosis, as originally maintained by Warthin and further emphasized by the work of Pearce and Austin,[16] or whether, as maintained by Rous and Robertson,[17] that erythrocytes are first reduced to haemoglobin dust by a process of attrition before phagocytosis occurs. The recent work of Krumbhaar and Chanutin[15] would seem to support the latter view.

(b) The chemistry of the red corpuscles.

With increasing knowledge of its chemical properties the functional dignity of the red corpuscle becomes more and more impressive. The investigations of L. J. Henderson, Barcroft, Haldane, Y. Henderson and others have shown that among its activities are the transport of carbon dioxide, the maintenance of a proper hydrogen ion concentration for the plasma, and perhaps a regulatory influence on the transfusion of water from tissues to plasma. The secret of how the blood becomes relieved of its load of carbon dioxide in the lungs has been revealed by the work of L. J. Henderson,[18] who has shown that this is accomplished through the increasing acidity of haemoglobin incident to oxidation. Perhaps this is the most notable contribution to blood physiology that has been made in the past decade.

Barr and Peters[19] have shown that the carbon dioxide absorption curve of the blood becomes very much "flattened" in severe anemia so that there is difficulty in the absorption of carbon dioxide from the tissues and the elimination thereof in the lungs. This flat curve permits a greater difference than normal between the hydrogen ion concentration of the venous and arterial blood and may also render more difficult the reabsorption of water on the venous side of the capillary network. In this work, then, there is a possible explanation of the dyspnoea and the oedema of severe anemia.

The oxygen "consumption," that is, the difference between arterial and venous oxygen content of the blood, is not materially altered in cases of severe anemia according to Harrop,[20] who also shows that in cases with marked cardiac decompensation there is not only a sensible arterial unsaturation, but also an increase in the difference between arterial and venous oxygen content of the blood. On the basis of these facts Lundsgaard[21] explains the absence of a true cyanosis in severe anemia. The body cannot afford the arterial unsaturation.

Many new methods for the estimation of haemoglobin have been introduced within the past five years. A summary and comparison of these is given in a review by Robscheit.[22] Clearly, the most important method, however, is that of Van Slyke[23] by means of which the oxygen-containing capacity of blood may be easily and accurately estimated. By such a method clinical instruments may be readily standardized and these now acquire a degree of accuracy not hitherto possible.

Williamson,[24] by means of spectroscopic analysis, has studied the haemoglobin content of the blood of a large number of individuals at different ages. His work serves to establish accurate standards of haemoglobin values, especially in infancy and early childhood. As a corollary of this work Mayers[25] has studied carefully the level of red corpuscle counts, especially in early life, and points out the contrast between the low normal values for haemoglobin determinations and the high values for red corpuscle counts in early childhood.

REACTIONS FOLLOWING THE USE OF BLOOD TRANSFUSION.

The widespread use of blood transfusion in the treatment of all types of anemia has kept to the fore the question of the cause of the severe reactions that sometimes follow such a procedure. The occurrence of hemolytic reactions following the transfusion of blood from donors of the same isoagglutination group as the recipients, and the demonstration by Robertson and Rous[26] of the induced development of autoisoagglutinins in rabbits, has prompted many to establish a practice which ought to be universal, namely, the direct testing of the cells of the donor against the serum of the recipient before each transfusion. The work of Sellards and Minot,[9] who showed that hemolyzed blood, *per se*, is not toxic to human beings, leads one to wonder, however, whether it is the hemolysis of the transfused red corpuscles that is responsible for certain of these reactions seen especially in pernicious anemia. Bowcock,[55] who has recently studied the severe reactions seen in patients following repeated blood transfusions, thinks that they are manifestations of allergy and points out that they can not always be precluded by simple agglutination tests.

The statement is still made by some that in transfusing blood into infants one may, with impunity, use a parent as a donor without first performing the agglutination tests. The work of B. B. Jones[27] shows clearly, however, that the group of an individual is usually determined at birth, and the work of Happ[28] indicates that even with ordinary technique group determination is frequently demonstrable in the newly born.

ANEMIA DUE TO BLOOD LOSS.

Robertson and Bock[29] have shown that if the degree of anemia following haemorrhage is such that the percentage of haemoglobin is in the neighborhood of 25 a critical low level of plasma volume is reached. In this case the blood will not dilute to make up the loss of plasma volume and fluid will not usually be retained within the vessels unless a transfusion of blood is given. In case the anemia does not reach this level, however, dilution of the blood will follow the extravascular introduction of fluid and this will be manifested by a temporary decline in the percentage of haemoglobin, a favorable sign under these conditions.

The efficacy of the customary subsequent treatment of anemia due to blood loss is brought into question by recent investigations. Musser[30] found that the administration of inorganic iron produced no constant alteration in the course of experimental haemorrhagic anemia in dogs, and Whipple and Robscheit,[31] also working with dogs, found iron and arsenic to be without influence on anemia induced by bleeding. On the other hand, red meat and cooked liver were found to be beneficial. Owing to the considerable difference in the sensitivity of the haemopoietic systems of man and laboratory animals one cannot apply directly such evidence to human beings, but their work suggests lines of investigation that ought to be carried out.

Interest attaches to the work relative to the possible influence of germanium dioxide on bone marrow stimulation. Hammett, Nowrey, and Muller,[32] from their work on mice, are inclined to think that this substance has a definite influence on the bone marrow, and Kast, Croll and Schmitz,[33] who have used it in human beings, report its possibly favorable action. A careful consideration of the methods of studying increased blood formation, as used by these investigators, leads one to conclude, however, that a stimulating effect of germanium dioxide has not yet been demonstrated.

PERNICIOUS ANEMIA.

Until very recently all theories of the etiology and pathogenesis of pernicious anemia have included as a *sine qua non* the conception of increased blood destruction. The histology of the blood, the laying down of hemosiderin deposits in the liver and spleen, as well as the increased output of bile pigments in duodenal contents, stools and urine as reported by Robertson,[34] Griffin, Stanford and Szlapka,[35] Hansmann and Howard[36] and many others have all been taken as evidence that there is an actual increased destruction of red blood corpuscles in this disease. C. M. Jones[37] points out, however, that the high level of bile pigment elimination seen in pernicious anemia can not be due solely to increased blood destruction and suggests that altered liver function is also a factor in causing the increased output of bile pigment. Whipple[38] is inclined to stress even more than Jones the rôle of altered liver function in pernicious anemia. He concludes that pernicious anemia is a disease characterized rather by the overproduction of pigment than by any undue destruction of red corpuscles and haemoglobin. Then, too, Ashby[8] from her own observations on the length of life of transfused erythrocytes in pernicious anemia is inclined to believe that inasmuch as the transfused red corpuscle lives longer in cases of pernicious anemia than in the normal there can be no hemolytic substance responsible for blood destruction in this disease.

On the other hand, Wearn, Warren and Ames[39] find no difference between the length of life of red corpuscles transfused into persons suffering from pernicious anemia and those suffering from anemia associated with nephritis, and they are careful to point out that since only one strictly normal individual has ever been studied in this respect neither their own observations nor those of Ashby can be taken as evidence that increased blood destruction does not occur in pernicious anemia.

Moreover, the studies of Zinck, Clark and Evans[40] on the protective action of human blood serum against the hemolysis of mouse corpuscles by sodium oleate indicate that the blood serum in pernicious anemia is deficient in this property, and more recent work on the increased fragility of the red corpuscles in pernicious anemia when tested against homologous serum[44] shows that the serum of pernicious anemia patients in a state of relapse is at least potentially hemolytic.

It is premature to assert that there is no increase in the quantity of blood destroyed in pernicious anemia.

In recent years it has become the fashion, and with much justification, more and more to regard factors other than the blood in making the diagnosis of pernicious anemia. Attention is especially directed to the nervous system and the gastro-intestinal tract. The extensive clinical observations of Woltmann[42] again emphasize the importance of neurological findings so long ago recorded by Minnich.[43]

Minot has recently discussed the importance of achylia gastrica in relation to the digestive disturbances seen in pernicious anemia, and Levine and Ladd,[45] in a series of 150 cases recently studied, again point out the constancy of gastric anacidity in this disease. Hurst[46] is so impressed with these findings that he regards a preëxisting gastric anacidity permitting parasites to enter the intestines as a causative factor of the disease. One of the principal arguments in favor of the intestinal origin of the cause of pernicious anemia has been the constant finding of hemosiderin deposits within the liver parenchyma. The finding of hemosiderin in the liver cells has been taken as evidence that the reported pathological blood destruction seen in this disease is confined to the liver. The very recent work of McMasters, Rous and Larimore,[47] however, shows conclusively that the repeated subcutaneous introduction of small amounts of free haemoglobin leads to an identical siderosis, and hence the finding of hemosiderin in the liver parenchyma in pernicious anemia does not constitute evidence that the pathological destruction of blood is localized within the portal tributaries.

In recent literature syphilis seems to be mentioned in connection with pernicious anemia only for the purpose of showing that it is not an etiological agent. But Foucar and Stokes[48] point out with justification the difficulty in making a diagnosis of pernicious anemia in cases of syphilis with severe anemia and symptoms referable to the nervous system.

The treatment of pernicious anemia is still so unsatisfactory that one cannot formulate in a given case even an approximate idea of the duration of life.[49] In addition to general hygienic measures and the administration of hydrochloric acid, irradiation, various physiotherapeutic procedures, arsphenamine, and blood transfusion continue to be used with indifferent success. The indefinite duration of life and the strong tendency to spontaneous remissions enhance the difficulty of evaluating the efficacy of any therapeutic procedure.

Neu[50] and others have recently tried irradiation with "hard rays" over the long bones. Though very rapid rises in the red cell count and haemoglobin are reported following such exposure, an insufficient number of cases has been observed to permit an evaluation of the efficacy of this manner of treatment. Foucar and Stokes[48] have studied the influence of arsphenamine on pernicious anemia and report that, although slight improvement sometimes follows its use in this disease, it is more apt to benefit cases of anemia of the secondary type.

It cannot be said that enthusiasm for splenectomy in the treatment of pernicious anemia has increased during the past five years. In 1916, Lee, Minot and Vincent,[51] from a study of fifteen cases, concluded that splenectomy resulted in the greatest stimulation of the bone marrow of any known therapeutic agent, but that it did not alter the essential course of the disease. The most extensive recent series of cases is that reported from the Mayo Clinic by Giffin and Szlapka.[52] These authors report fifty cases, with an operative mortality of 6 per cent. Ten cases survived three years and five survived four and one-half years after operation. Giffin and Szlapka are of the opinion that a remission usually follows splenectomy and that the measure probably prolongs life in 20 per cent. of cases. As previously suggested by Minot, however, it will probably turn out that those patients most benefited by splenectomy are those in whom the disease simulates the picture seen in hemolytic icterus.

In spite of the widespread use of transfusion of blood in the treatment of pernicious anemia very little is known of the mechanism by which the beneficial effects of this procedure are brought about. The impression is prevalent that blood transfusion stimulates the marrow and thus leads to a remission. Denny[53] found the total blood volume to be diminished in eight of ten cases of pernicious anemia studied by him, and if this be the case one would suppose, as a corollary of Robertson's work[54] on the effect of plethora on the bone marrow, that transfusion would permit resting of the marrow rather than stimulation, an accomplishment that might well be of advantage to the organism. Moreover, it is entirely possible that the introduction of humoral elements in the plasma might exert a favorable influence on the disease, and one is tempted to speculate as to the possible effect of the transfusion of blood from a patient in a state of remission into one in a state of relapse.

Tompkins, Brittingham and Drinker[56] have made observations on the influence of blood transfusion on the basal metabolism in pernicious anemia. Their work shows that transfusion uniformly lowers the metabolism and is probably most efficacious in those cases showing an increased metabolism before transfusion.

Yet whatever the mechanism by which the effects of transfusion are accomplished, most observers will probably agree with Minot[57] that transfusion, though it does not cure the disease nor prolong life, is more often followed by a remission than any other therapeutic measure, barring only the rarely to be advised operation of splenectomy.

HEMOLYTIC ICTERUS.

A very extensive review of this disease, written by Tileston,[58] appears in a recent number of *Medicine.*

Splenectomy continues to be advocated as the most important procedure in the treatment of hemolytic icterus. W. J. Mayo[59] reports thirty consecutive operations, with but one death, and Giffin[60] states that all but one of ten cases of this disease in whom splenectomy was performed at the Mayo Clinic reported as well five years after operation. Although there can be no doubt but that splenectomy influences favorably many cases of this disease, it must still be borne in mind that in its milder form hemolytic icterus is perfectly compatible with a comfortable and useful life, and in such cases it seems doubtful whether splenectomy should be urged.

SPLENIC ANEMIA.

When one considers that fibrosis of the spleen, from whatever cause, is likely to be followed by anemia and suppression of the myelogenous leucocytes, the great difficulty of making a diagnosis of Banti's Disease—primary endophlebitis of the splenic veins[61]—becomes at once apparent. Thus, cirrhosis of the liver or any other condition causing portal obstruction may induce congestion and ultimately fibrosis of the spleen,[62] and hence give rise to a picture clinically indistinguishable from the so-called second stage of Banti's Disease. Canelli[63] cites one case of his own and nine others from the literature, in which a diagnosis of Banti's Disease was made during life, but in which autopsy showed hepatitis with cirrhosis of liver and spleen but no involvement of the splenic veins.

Obviously splenectomy is most likely to effect permanent relief in cases of the Banti type in which the operation is performed before changes in the liver occur. Nevertheless, splenectomy may be indicated in other types of cases in which there is severe anemia or ascites. Thus, for example, W. J. Mayo[64] reports five cases of syphilis with large, fibrotic spleens in which removal of the spleen caused marked improvement in the anemia and seemed to permit favorable reaction to antisyphilitic treatment.

INFANTILE SPLENIC ANEMIA.

There is hardly a disease about which more confusion has arisen than the disease first described by von Jaksch[65] and often called by his name. In an excellent review of this condition Evans and Happ[66] point out that von Jaksch's anemia has been looked upon as a secondary anemia, an aleukemic stage of true leukemia, a transition between pernicious anemia and leukemia, an atypical or pseudo leukemia, and as a disease *sui generis*. These authors were unable to find any important evidence that the disease is an entity and prefer to look upon it as the "infantile response to some agent producing secondary anemia." This same thought is echoed in the paper of Mensi,[67] and also in the work of Hallez,[68] who claims to have produced a condition resembling von Jaksch's anemia in young animals by means of various agents; extracts of cholera spirilla, typhoid bacilli, preparations of the stools of infants with severe diarrhoea. Hallez emphasizes the severity of the disease but admits that spontaneous recoveries are frequent. Transfusions of blood may tide the patient over the acute stages of the disease but exert no influence on its course.

REFERENCES.

1 Lee, R. I.: Boston Med. and Surg. Jour., clxx, No. 15, 580, Apr. 9, 1914.
2 Drinker, C. K., Drinker, K. R., and Lund, C. C.: Am. Jour. Physiol., lxii, No. 1, 1-92, Sept., 1922.
3 Key, J. A.: Arch. Int. Med., xxviii, 511, 1921.
4 Hawes, J. B., 2nd: Boston Med. and Surg. Jour., clxi, 493, 1909.
5 Cunningham, T. D.: Arch. Int. Med., xxvi, 405, 1920.
6 Harrop, G. A., Jr.: Arch. Int. Med., xxiii, 745, 1919.
7 The National Aniline and Chemical Company's Brilliant Cresyl Blue No. 1124 is a satisfactory dye for staining the reticulum of red corpuscles.
8 Ashby, W.: Jour. of Exper. Med., 34, 127, 1921.
9 Sellards, A. W., and Minot, G. R.: Jour. Med. Res., N. S. xxix, 469, 1916.
10 Wilbur, R. L., and Addis, T.: Arch. Int. Med., 13, 235, 1914.
11 Hooper, C. W., and Whipple, G. H.: Am. Jour. Physiol., 40, 332, 1916.
12 van der Bergh, A. A. H., and Snapper, J.: Deutsch. Arch. f. klin. Med., cx, 540, 1913.
13 Blankenhorn, M. S.: Arch. Int. Med., xix, 344, 1917.
14 Jones, C. M., and Jones, B. B.: Arch. Int. Med., xxix, 669, 1922.
15 Krumbhaar, E. B., and Chanutin, A.: Jour. Exper. Med., 35, 847, 1922.
16 Pearce, R. M., and Austin, J. H.: Jour. Exper. Med., 16, 780, 1912.
17 Rous, P., and Robertson, O. H.: Jour. Exper. Med., 25, 651, 1917.
18 Henderson, L. J.: Jour. Biol. Chem., 41, 401, 1920.
19 Barr, D. P., and Peters, J. P., Jr.: Jour. Biol. Chem., 45, 571, 1921.
20 Harrop, G. A., Jr.: Jour. Exper. Med., 30, 241, 1919.
21 Lundsgaard, C.: Jour. Exper. Med., 30, 147, 1919.
22 Robscheit, F. S.: Jour. Biol. Chem., 41, 209, 1920.
23 Van Slyke, D. D.: Jour. Biol. Chem., 33, 127, 1918.
24 Williamson, C. S.: Arch. Int. Med., 18, 505, 1916.
25 Mayers, L. H.: Arch. Int. Med., 30, 478, 1922.
26 Robertson, O. H., and Rous, P.: Jour. Exper. Med., 35, 141, 1922.
27 Jones, B. B.: Am. Jour. Dis. Child., 22, 101, 1921.
28 Happ, W. M.: Jour. Exper. Med., 31, 313, 1920.
29 Robertson, O. H., and Bock, A. V.: Jour. Exper. Med., 29, 139, 1919.
30 Musser, J. H., Jr.: Arch. Int. Med., 28, 638, 1921.
31 Whipple, G. H., and Robscheit, F. S.: Arch. Int. Med., 27, 591, 1921.
32 Hammett, F. S., Nowrey, J. E., and Muller, J. H.: Jour. Exper. Med., 35, 173, 1922.
33 Kast, L., Croll, H. M., and Schmitz, H. W.: Jour. of Lab. and Clin. Med., 7, 643, 1922.
34 Robertson, O. H.: Arch. Int. Med., 15, 1072, 1915.
35 Giffin, H. Z., Stanford, A. H., and Szlapka, T. L.: Am. Jour. Med. Sc., 155, 562, 1918.
36 Hansmann, G. H., and Howard, C. P.: Jour. Am. Med. Assn., 73, 1262, 1919.
37 Jones, C. M.: Arch. Int. Med., 29, 643, 1922.
38 Whipple, G. H.: Arch. Int. Med., 29, 71, 1922.
39 Wearn, J. T., Warren, S., and Ames, O.: Arch. Int. Med., 29, 527, 1922.
40 Zinck, H., Clark, H. M., and Evans, F. S.: Bull. Johns Hopkins Hosp., 33, 16, 1922.
41 Buckman, T. E.: Med. Clin. North Am., 5, 1441, 1922.
42 Woltmann, H. W.: Am. Jour. Med. Sc., 157, 400, 1919.
43 Minnich, W.: Ztschr. f. klin. Med., 22, 60, 1893.
44 Minot, G. R.: Internat. Clin., 1, Series 32, p. 39.
45 Levine, S. A., and Ladd, W. S.: Bull. Johns Hopkins Hosp., 72, 157, 1921.
46 Hurst, A. F.: Guy's Hosp. Reports, 72, 157, 1922.
47 McMasters, P. D., Rous, P., and Larimore, L. C.: Jour. Exper. Med., 35, 521, 1922.
48 Foucar, H. O., and Stokes, J. H.: Am. Jour. Med. Sc., 162, 633, 1921.
49 Stockton, C. G.: Am. Jour. Med. Sc., 158, 471, 1919.
50 Neu, O.: Münch. Med. Wchnschr., 68, Nov. 11, 1922.
51 Lee, R. I., Minot, G. R., and Vincent, B.: Jour. Am. Med. Assn., 47, 719, Sept. 2, 1916.
52 Giffin, H. Z., and Szlapka, T. L.: Jour. Am. Med. Assn., 76, 290, Jan. 29, 1921.
53 Denny, G. P.: Arch. Int. Med., 27, 38, 1921.
54 Robertson, O. H. Jour. Exper. Med., 26, 221, 1917.
55 Bowcock, H. M.: Bull. Johns Hopkins Hosp., 32, 83, 1921.
56 Tompkins, E. H., Brittingham, H. H., and Drinker, C. K.: Arch. Int. Med., 23, 421, 1919.
57 Minot, G. R.: Med. Clin. North Am., 3, 1014, 1920.
58 Tileston, W.: Medicine, 1, 355, 1922.
59 Mayo, W. J.: Surg. Clin. North Am., 1, 1306, 1921.
60 Giffin, H. Z.: Surg., Gyn. and Obstet., 25, 157, 1917.
61 Banti, G.: Arch. l. Scula Anat. Pathol., 2, 53, 1883.
62 Mallory, F. B.: Personal communication.
63 Canelli, A. F.: Ped. (Naples), 18, 832, 1921.
64 Mayo, W. J.: Trans. Am. Surg. Assn., 37, 483, 1919.
65 von Jaksch, R.: Wien. klin. Wchnschr., 2, 435, 1889.
66 Evans, F. A., and Happ, W. M.: Bull. Johns Hopkins Hosp., 33, 1, 1922.
67 Mensi, E.: Pediatria (Naples), abs. Jour. Am. Med. Assn., 77, 1005, Sept. 16, 1922.
68 Hallez, G. L.: Nourisson (Paris), 9, 24, 1921.

A WARNING.

Every case of so-called chicken-pox in an adult should have careful study. Many mild cases of smallpox have been called chicken-pox. Especial consideration should be given to strangers with this type of eruption. The Chicago Bulletin of Sanitary Instruction reports a case of smallpox attended by a prominent doctor. The diagnosis was chicken-pox. Two other cases of smallpox developed in this family.

Current Literature Department.

ABSTRACTORS.

GERARDO M. BALBONI
WM. B. BREED
LAURENCE D. CHAPIN
AUSTIN W. CHEEVER
ISADOR CORIAT
ERNEST M. DALAND
HORACE GRAY
ROBERT M. GREEN
JOHN B. HAWES, 2D
JOHN S. HODGSON
FRED S. HOPKINS
CHESTER M. JONES
CHARLES H. LAWRENCE
HERMAN A. OSGOOD
FRANCIS W. PALFREY
EDWARD H. RISLEY
WILLIAM M. SHEDDEN
GEORGE G. SMITH
JOHN B. SWIFT, JR.
WILDER TILESTON
BRYANT D. WETHERELL

ACTION OF BENZYL BENZOATE AND MORPHINE ON THE VESICAL SPHINCTER.

STATER (*Jour. of Urol.*, Sept., 1922) says the normal intravesical pressure and sphincter tone varies greatly in rabbits. The administration of morphine to rabbits is followed by a marked increase in the sphincter tonus. Benzyl benzoate lowers the sphincter tone both in normal rabbits and in those with an increased tonus due to previous administration of morphine.

These experimental findings are consistent with the clinical observations of bladder distention relieved by benzyl benzoate, in cases in which therapeutic doses of morphine have or have not been administered. [B. D. W.]

PRESSURE USED IN PYELOGRAPHY AND ITS EFFECTS UPON THE KIDNEY.

TODD AND THOMPSON (*Jour. of Urol.*, Sept., 1922) state that from the pathological specimens obtained at operation and from the evidence gained from animal experiment, they believe that injection of solutions into the kidney under considerable pressure is followed by certain traumatic lesions in the kidney. These lesions might become the site for the lodgment of infection and subsequent penetration of the infection into the deeper structures of the kidney. They may possibly serve as nuclei for stone formation.

In some patients submitted to kidney injections there is a striking diminution of the 'phthalein excretion following this procedure. This finding adds weight to the present prevalent opinion that injection of both kidneys simultaneously is unwise. Apparently, this diminution is only transient unless the pressure is unduly great and actually causes an extensive split of the kidney substance.

Satisfactory filling of the kidney pelvis for either therapeutic or radiographic purposes may be obtained by a slow injection at 50 mm. Hg. pressure or less. A special gauge adapter is presented. [B. D. W.]

A CASE OF BILATERAL PYELITIS DUE TO THE BACILLUS PYOCYANEUS. AN UNUSUAL KIDNEY INFECTION DIAGNOSED THROUGH URETERAL CATHETERIZATION.

MATHE AND BELT (*Jour. of Urol.*, Oct., 1922) say B. pyocyaneus is a relatively rare invader of the upper urinary tract as a cause of pyelitis: in comparison to other well-known organisms, it occurs in exceeding rarity. In a total of 835 cases of upper urinary infection compiled from reports of various authors appearing in the literature, the invading organisms occur in the following incidence: B. coli, 631; Staphylococcus aureas and albus, 89; Streptococci, 34. The rest is divided up among thirteen other organisms, of which B. pyocyaneus appeared in three cases.

The incidence of occurrence of B. pyocyaneus in the urinary tract in three San Francisco hospitals is: In 4329 urine cultures reviewed by us, 16 cases were found, three in the renal pelvis and thirteen in the bladder. [B. D. W.]

THE PATHOLOGIC CHANGES IN EXPERIMENTAL, ASCENDING AND HEMATOGENOUS PYELITIS.

HELMHOLZ (*Jour. of Urol.*, Oct., 1922) states that hematogenous pyelitis was brought about by intravenous injections of B. coli communis. The characteristic features obtained were: The uniform involvement of the kidney in either the cortex or medulla: the localization of the inflammatory reaction in the pelvic lining of the papillae; the complete freedom of reaction of the peripelvic fat. This last is emphasized because it is in such contrast to that found in the ascending group.

Ascending pyelitis was produced by merely introducing bacteria into the bladder without irritation of the bladder or obstruction to the flow of urine. There was infiltration of the parietal pelvic wall, most constant in the side toward the substance of the kidney. Reaction was noted in the peripelvic fat.

The lesions produced by intravenous injection tend to localize in the kidney substance and in the papilla and adjacent lining of the pelvis. The lesions produced by intracystic injections tend to localize in the small finger-like projection of the parietal wall of the pelvis. [B. D. W.]

EXTRAPERITONEAL PELVIC SUPPURATION IN THE MALE.

HERMAN AND STUART (*Jour. of Urol.*, Oct., 1922) state that the principal causes of this condition are periprostatitis and perivesiculitis, either venereal or non-venereal in origin. Other causes are:

1. Infections following surgical injuries and operations. Among the rarer causes are the transrectal or intravesical insertion of radium needles in the treatment of prostatic or vesicular carcinoma; and the transperineal injection of medicines into, or the aspiration of pus from, the prostate gland.
2. Traumatic injuries: slow extravasation of urine.
3. Instrumental injuries to the bladder and deep urethra.
4. Non-traumatic: Pericystitis; sigmoidal diverticulitis; diverticulum of the bladder with diverticulitis; suppuration arising from infection of the pelvic lymphatics; caries of the sacro-iliac bones; secondary infection of dermoid or echinococcus cysts.

[B. D. W.]

THE OPERATIVE CURE OF INCONTINENCE OF URINE, WITH ILLUSTRATIVE CASES.

YOUNG (*Jour. of Urol.*, Nov., 1922) says the causes are divided into four groups:

1. Postoperative incontinence:

(a) Result of median urethrotomy and prostatectomy.

(b) Perineal prostatectomy. In these cases there is usually a wide dilatation of both the internal and external sphincters, and the urine flows away. The author has two methods of repair:

(1) Suprapubicystotomy—plastic operation upon the internal sphincter.

(2) Excision of perineal scar tissue and plastic to restore the external sphincter.

2. Vesical perineal fistula with incontinence following fracture of the pelvis. In these cases, following severe accident, the pelvis was badly fractured and the bladder and urethra ruptured with resultant incontinence of urine which was found in all cases to be due to the formation of peri-prostatic vesico-perineal fistulae. In these cases the operation required both suprapubic and perineal attack with ex-

cision of the fistulous tract, closure of its internal orifice, closure of the perineal wound, and, in one case, repair of the external sphincter.

3. Incontinence from perineal vesical fistula associated with dermoid cyst of prevesical space. Only one case comes under this group and is described fully.

4. Incontinence of urine associated with epispadias. All of these cases showed a widely dilated urethra with absence of musculature along the superior wall, not only in the region of the prostatic urethra, but also in the region of the membranous urethra and triangular ligament. There is marked dilatation of both internal and external sphincters, and the operative problem which was presented was to excise sufficient tissue in order to tighten the urethra and restore sphincteric control of both external and internal sphincters. [B. D. W.]

NITROGEN RETENTION IN EXPERIMENTAL NEPHRITIS.

UNDERHILL AND KAPSINOW (*Jour. of Urol.*, Oct., 1922) report that there is a close relationship in uranium nephritis between the degree of retention of non-protein nitrogen and creatinine and blood concentration, the greater the retention the more dilute becomes the blood. It is possible that changes in blood concentration may be employed clinically as an indication of the severity of a nephritic condition; and it is possible that this factor in part at least is responsible for the anemia observed clinically at times in nephritis. [B. D. W.]

ASSOCIATION OF HYPERNEPHROMA WITH TUBEROSE BRAIN SCLEROSIS AND ADENOMA SEBACEUM.

HYMAN (*Jour. of Urol.*, Oct., 1922) states that forty years ago an association of three maladies was reported. It was observed that in the condition known as tuberose brain sclerosis there was frequently present a peculiar skin eruption known as adenoma sebaceum. Then in autopsy studies of such patients tumors of the kidney, either single or multiple, were present.

Up to the year 1910, 60 cases had been collected from the literature; very few have been reported since. A case is reported showing mental condition, eruption, kidney tumor; operation revealed hypernephroma. [B. D. W.]

THE PATHOLOGY AND MECHANISM OF PROSTATIC HYPERTROPHY.

TENENBAUM (*Jour. of Urol.*, Nov., 1922) reports that the progress in prostatic pathology leads to the conclusion that the so-called prostatic hypertrophy is really a hyperplasia of the peri-urethral glands. The prostate itself undergoes atrophy through compression by the growth intruding upon, or primarily as a physiological presenile process occurring in advanced life. Prostatic hypertrophy cannot be considered as a disease. It is with the secondary changes in the urinary tract caused by proliferation of the peri-urethral glands that the true pathological process develops. The changes in the urethra in regard to size, lumen and curve are the result of various coöperating and antagonistic forces, of which the direct pressure of the intruding glands, the indirect influence of the changes in the bladder upon the urethra and the anatomical peculiarities of the latter, are the most important factors. The part of the urethra which is directly subjected to moulding by the growth is the supramontane part of the prostatic urethra.

The muscular apparatus of the urethra suffers a gradual loss of elasticity. The most noticeable changes are observed in the so-called "longitudinal muscle" of the urethra, which is subject to direct pressure and distortion by the growth. There may be distinguished two types of intrusion of the growth into the bladder. The direct invasion occurring on or near the sphincter of the bladder, which is associated with alterations in the symmetry of the bladder and the outline of the sphincter. This is not observed in the indirect invasions, which raise the floor of the bladder in toto without affecting its symmetry directly. The pathological middle lobe has nothing in common with the anatomical or Home's prostatic lobe. The mechanism of the alterations which take place in the bladder is the result of two antagonistic forces which are represented in the quality and the degree of obstruction and in the capacity of the bladder to resist the effects of obstruction. The early stages of bladder involvement are marked by its increased muscular activity. In the later stages of growing disproportion between obstruction and resistance, distention and atony of the bladder are combined with impaired muscular activity.

The conception of back pressure as the primary cause of the changes occurring in the upper urinary tract is inconsistent with the anatomical and physiological peculiarities of the bladder and ureters. Contraction of the bladder prevents rather than causes urinary reflux, and in an atonic bladder urinary reflux is still less probable. According to Tandler and Zuckerkandel advanced bladder distention in prostatics favors compression and narrowing of the ureters, which in turn may cause obstruction to the downflow of urine and be followed by secondary enlargement of the parts above the stricture. The early stages of renal involvement occurring in prostatics are marked by congestion of the kidneys, associated with nocturnal polyuria. They are followed by gradual destruction of the kidney substance with the symptoms of azotemia and hypothenuria. The cystoscopic picture of an enlarged interureteric ligament extending beyond the orifices of the ureters, as observed in the later course of prostatic hypertrophy, is suggestive of complications in the upper urinary tract. [B. D. W.]

CARCINOMA IN THE URETEROPELVIC JUNCTURE METASTATIC FROM THE PROSTATE.

GIORDANO AND BUMPUS (*Jour. of Urol.*, Nov., 1922) state that metastasis from carcinoma of the prostate gland is usually detected first in the lumbar sacral region. In a series of 297 cases 28 per cent. showed metastasis in the bones. The next most common site of metastasis is in the lymphatics. Metastasis to the abdominal viscera through the blood stream is rarely seen.

The authors report a case in which metastasis was found in the periprostatic and vertebral lymph nodes, and in the left kidney and ureter, close to the renal pelvis. This might illustrate the direct lymphatic connection to the prostate, bladder, and kidney and may be considered evidence that infections of the bladder reach the kidney, not by the lumen of the ureters, but by the lymphatics. However, this does not seem probable since the lymphatics of the ureters were not involved.

In this case, the pressure of the cancer cells in the blood vessels of the lungs and the metastatic renal infarct would seem to demonstrate that the malignancy was carried through the blood stream to the ureter rather than by the lymphatics, a route probably travelled by many so-called ascending infections. [B. D. W.]

STREPTOTHRIX PROSTATITIS.

SCHWARTZ AND CANCIK (*Jour. of Urol.*, Nov., 1922) report streptothrix found by cultural methods in 65 per cent. of the cases. Most of the cases with positive culture of the streptothrix differed clinically from the other cases in that the urethral discharge was distinctly mucopurulent.

Of the ten cases presenting clinical cures, eight were culturally negative to streptothrix two weeks after suspension of all treatment. Ten, or 77 per cent. of all cases in which streptothrix was demonstrated, were relieved of their urethral discharge by specific vaccine therapy, only three of the ten cases comprising this percentage requiring supplemental prostatic massage. Cases responded to autogenous vaccine therapy rapidly or not at all. Of the eight cases in which both a clinical and bacteriologic cure were obtained, seven received ten injections or less. The eighth case received 15 injections. [B. D. W.]

Sulpharsphenamine. Its Manufacture and Its Chemical and Chemotherapeutic Properties.

Voegtlin, Johnson, and Dyer (*Pub. Health Reports*, Vol. 37, No. 45, Nov. 10, 1922) find that sulpharsphenamine has certain definite advantages over neoarsphenamine; great stability of drug in dry form and in watery solutions; ease of manufacture; constancy of toxic and parasiticidal action; and suitability for hypodermic administration. The intravenous injection is well tolerated when doses up to about two-thirds of the M.L.D. are used. The toxicity of an average preparation was also established by intravenous injection into rabbits, and a minimum lethal dose of 320 mg. per kilo was found. In rats the M.L.D. of the same preparation was 400 mg. per kilo. It was found that single doses of arsphenamine of 15 mg. per kilo cause the disappearance of parasites from the lesions; with a dose of 5-10 mg. per kilo the parasites are still in evidence for two days; smaller doses are ineffective. Compared with figures for sulpharsphenamine, a subcutaneous injection of 15 mg. per kilo of this drug is at least as effective as the same dose of arsphenamine, yet sulpharsphenamine contains 20.77 per cent. arsenic, while arsphenamine contains on the average of 30 per cent. On the arsenic basis, sulpharsphenamine has, therefore, a higher spirocheticidal value than arsphenamine. The parasiticidal action of sulpharsphenamine is slower than that of the arsphenamine. The former drug might be used in cases with indications of an extensive syphilitic involvement of the cardiovascular system in which a slow action of the remedy is desirable. It must be strongly emphasized that before the drug can have general use it will be necessary to give it an exhaustive trial as to its curative power in human syphilis. The clinical studies especially will have to consider whether sulpharsphenamine has for normal and syphilitic tissue, at least the same penetrating powers as arsphenamine or neoarsphenamine. The main difficulty with the arsenicals in the present use appears in their failure to reach the last spirochetes which may be buried in lesions that are difficult to reach. The authors suggest that sulpharsphenamine be given a clinical trial, particularly in patients' veins which are difficult to reach (adipose patients, infants) and cases which exhibit an unusual idiosyncrasy to intravenous treatment.

Roentgen Therapy in Dentistry.

Garretson (*The Amer. Jour. Roent.*, Nov., 1922) says the x-ray, in dentistry, is now being employed as a therapeutic agent, where formerly its use was limited almost solely to radiograms of the teeth to locate areas of bone and tooth disease.

In the treatment of such diseases as pyorrhea and neuritis, Roentgen therapy is proving a valuable factor. Swellings from jaw infections have subsided, pain and soreness have left parts as a result of a few doses of the x-rays, and have apparently been greatly influenced by this form of treatment. This is due to the effect of the x-rays on the lymphatic tissue.

It is, of course, necessary that the proper apparatus be installed for such treatment, and a working knowledge as to the dosage and technique required on each individual case. (The technic advocated by the author will be found in the November, 1921, issue of *Dental Cosmos.*) [H. A. O.]

The Roentgenological Study of the Pathological Gall-Bladder.

Kirklin (*The Amer. Jour. Roent.*, Nov., 1922) says in the roentgenological study of the gall-bladder he believes that gallstones should be of secondary importance, since a large number of stones offer no density and therefore cast negative shadows.

It is a recognized fact that a normal healthy gall-bladder cannot be visualized. Hence, when the gall-bladder outline is definitely seen it is pathological.

The findings following a barium meal are of invaluable assistance in making a diagnosis even if no gall-bladder or gallstone shadows are discovered.

Technic: The patient is instructed to take two drams of compound licorice powders each night for two or three nights previous to the examination, and to eat no evening meal the day previous and no breakfast the morning of the examination.

First: take two to four exposures of the gall-bladder region (including all the area between the crest of the ilium and the tenth rib), using various technics, depending on size of patient. It varies from three to four and one-half in. spark gap with a distance of 22 inches. A barium meal is then given in the fluoroscopic room and indirect signs are noted. More gall-bladder exposures are made to locate findings which might have been missed on the first series. The hepatic flexure of the colon is studied at 18 to 24 hours. Reverse peristalsis is an important finding in gall-bladder work.

After a complete roentgenological study of a number of cases, the writer found, in checking the x-ray findings with those of the surgical, that 93½ per cent. of the Roentgen-ray conclusions were confirmed. [H. A. O.]

The Roentgen-Ray in the Diagnosis of Scoliosis.

Lamb (*The Amer. Jour. Roent.*, Nov., 1922) says in discussing scoliosis from an x-ray standpoint, one must not confuse the term scoliosis with the so-called functional or habitual scoliosis, which is not a deformity but a normal physiological posture.

True scoliosis is a fixed deformity of the spine. A normal spine can assume the postures identical to those of scoliosis, either to the right or left with ease, while in scoliosis the motion of the spine is so restricted that it cannot assume the opposed scoliotic posture to the limits of normal position.

In order to establish a diagnosis of scoliosis in its early stages, it is absolutely necessary to know the normal physiological scoliotic postures of the spine, for unless they are known, one of them may be easily taken for a deformity. In making an x-ray diagnosis the extreme right and left scoliotic positions must be used, and if the films taken in these two positions show the lateral bending to be symmetrical, there is no deformity; on the other hand, if an asymmetry is shown there is a fixed deformity.

To insure the correct position of the patient a frame is necessary, and a diagram for such a device is shown in this article. [H. A. O.]

THE BOSTON
Medical and Surgical Journal

Established in 1828

Published by The Massachusetts Medical Society under the jurisdiction of the following-named committee:

For three years WILLIAM H. ROBEY, JR., M.D.
ROGER I. LEE, M.D.
ROBERT B. OSGOOD, M.D.
For two years JAMES S. STONE, M.D.
HORACE D. ARNOLD, M.D.
CHANNING FROTHINGHAM, M.D.
For one year HOMER GAGE, M.D., *Chairman*.
EDWARD C. STREETER, M.D.
EDWARD W. TAYLOR, M.D.

EDITORIAL STAFF.
DAVID L. EDSALL, M.D.
WALTER B. CANNON, M.D.
REID HUNT, M.D.
ROBERT W. LOVETT, M.D.
FRANCIS W. PEABODY, M.D.
JOHN P. SUTHERLAND, M.D.
S. BURT WOLBACH, M.D.
GEORGE R. MINOT, M.D.
FRANK H. LAHEY, M.D.

WALTER P. BOWERS, M.D., *Managing Editor*.
GEORGE G. SMITH, M.D., *Assistant Editor*.

SUBSCRIPTION TERMS: *$6.00 per year in advance, postage paid for the United States. $7.56 per year for all foreign countries belonging to the Postal Union.*

Material for early publication should be received not later than noon on Saturday. Orders for reprints must be sent to the printer with galley proof of paper. Upon written request, authors will be furnished free one hundred eight-page reprints, without covers, or the equivalent in pages in articles of greater length.

The Journal does not hold itself responsible for statements made by any contributor.

Communications should be addressed to The Boston Medical and Surgical Journal, 126 Massachusetts Ave., Boston, Mass.

M. COUÉ IN BOSTON.

If one were to estimate the importance of M. Coué's message by such criteria as the crowds that besieged the ticket office, the price of the seats, and the number of columns of newsprint filled with this subject, one would be led to consider M. Coué's visit to Boston the event of the winter. To one observer, at least, the performance was a great disappointment. M. Coué, himself, appeared a bit bored, or, perhaps, as was natural, he was fatigued. At any rate, his manner was not impressive, and his talk, when boiled down, left very little solid residue. His argument was something like this:

We have a subconscious mind, which influences us much more than we realize. By recognition of this fact, we can become masters of ourselves, both physically and mentally. If we wish to accomplish a purpose, we must not say, "I cannot," or "it is beyond me." That influences the subconscious mind and hinders or prevents us from doing what we wish. The organic functions of the body are beyond control of the will, but are influenced by our subconscious ideas. Therefore, we must fix in our subconscious mind the idea of health. This may be done by repeating the famous formula. If one feels pain, one should sit in a darkened room, close the eyes, and repeat, "It is going," or "*Ca passe.*" "Repeat this fifty or a hundred times. Repeat it all day, if necessary. It is better to be saying this than to suffer and complain about it."

By way of illustrating the power of conviction, M. Coué had several individuals, and finally all the audience, clasp their hands together while he said, "You wish to separate your hands, but you cannot, you cannot, you cannot. Now you can." At the last words, the hands flew apart. A simple experiment, proving only that one cannot will himself to do both positive and negative at the same time. It is a fundamental experiment, however, and illustrates the psychological principle that you cannot tolerate, at the same instant, both the thought that you do feel pain and the thought that you do not feel pain. M. Coué simply exploits this basic idea, and builds his theory upon it.

M. Coué believes imagination to be stronger than will. Is it not a fact, however, that in obtaining relief by his method, the imagination is called into action by the will? One must will himself to repeat the formulæ which impress the subconscious mind. Aside from this objection, which after all may be too meticulous, we would not quarrel with M. Coué's teachings. As guideposts for mental hygiene they are reliable enough. People would be considerably happier if they could practice them with success. After fifty years of "getting better and better," what a fine world we should have! The difficulty is that no one will practice this as preventive medicine; only those who are afflicted will feel the urge to repeat the magic verse.

We could not wholly escape the impression that there is a sort of mental legerdemain in M. Coué's scheme. You see the rabbit and cannot prove that it did not come out of the hat, yet you really don't believe that was where it originated. Our sensations exist for us only as they penetrate our consciousness; if we can close our consciousness to them, they will no longer exist as sensations, even though the stimuli continue to send excitation waves along the afferent nerve-paths. There is a subtle unreality in it, somehow.

To our way of thinking, moreover, there is something incongruous in an intelligent being, possessed of a sense of humor, saying this smug and egotistical formula twenty times, t.i.d. To do it in earnest requires a certain childlike confidence in something. Coué's audience, as a matter of fact, appeared to be composed largely of the sort of people who believe a thing because it is printed.

Without a doubt certain people have been helped, as they have been helped for ages by healers, relics, shrines, and Christian Science. The least possible thought and the greatest possible publicity combine to work up a temporary interest that fills seats and sells newspapers, while many a serious problem is relegated to page 6. But why get excited? As M. Coué says—"*Ca passe, ca passe.*"

THE BACTERIUM PNEUMOSINTEES.

The daily papers have published an alleged announcement by Dr. Simon W. Flexner, director of the Rockefeller Institute of Medical Research, of the discovery of the influenza germ. It has been given the name of bacterium pneumosintees. Dr. Peter K. Olitsky and Dr. Frederick T. Gates are credited with this discovery. The germ is so small that it will pass through the spaces in an earthenware filter and can only be seen when magnified 1000 times.

The name of this germ signifies that its invasion of the pulmonary tissues deprives these tissues of the power of resisting the attacks of other bacteria commonly found in the nose and throat.

It is asserted that the bacterium pneumosintees is never found in healthy persons.

If verified, this discovery is epoch-making and leads the way to the development of preventive and remedial measures of incalculable value.

Further announcements of details of the demonstrations of the discovery are eagerly looked for.

Every discovery of the causes of disease adds new laurels to scientific research and places quackery on the defensive. It is quite probable that the unemotional announcement of this important addition to knowledge will, however, create less general interest than often follows the claims of pseudo scientists.

BOSTON TUBERCULOSIS ASSOCIATION.

The report of the annual meeting of this organization is of interest to all who are interested in public health work. Tuberculosis work has always stood for broad policies in that it aims to promote the highest type of physical wellbeing. The mastery of tuberculosis depends on sane living and hence the campaign against this disease lends strength to all other methods advocated for the prevention and cure of disease. The breadth of plans advocated by this Association warrants the endorsement of all people interested in personal as well as public health and calls for universal support.

The institutes inaugurated by the Boston Association have been wonderfully inspiring and the Prendergast Preventorium should be duplicated in every city of the Commonwealth.

In one department of the activities of this organization there is occasion for disappointment, not because the purpose is unworthy, but because of lack of support. There is scarcely a field of human effort which merits endorsement more than that devoted to finding occupation for consumptives. Aside from the economic features involved the comfort secured through the mental diversion afforded by useful work alone should prompt all who are able to assist to give liberally in order that these unfortunate sufferers may have the pleasure which may be secured by the useful employment of limited physical powers.

The challenge to our eminent Professor Cabot found in Dr. Hawes' address, is interesting and the promise of the demonstration of a disease unknown to Dr. Cabot will keep us on the *qui vive.* If Dr. Cabot will take up the challenge those on the side lines will have something to remember.

The Boston Association has set an example which should inspire all other similar organizations to greater effort.

PLEA TO CONGRESS.

Many organizations and individuals have sent appeals to members of Congress asking for more drastic measures in dealing with narcotic drug addiction. The Central Labor Union of Washington asks for a national anti-narcotic week and also that the President of the United States shall arrange for an international conference for the purpose of formulating plans and methods which may be put into effect for the purpose of eradicating the drug peril. The contention is made by this body that the use of habit-forming drugs is increasing to an alarming degree. The Progressive Civic League of Detroit, composed of women, contends that 9000 tons of narcotic drugs are being produced in the world, which is nearly 6000 tons more than is necessary. These women want a conference of nations to formulate restrictive legislation which would limit the production of raw material from which narcotic drugs are made.

Probably Congress would understand that if only enough raw material to provide for actual medical use is produced that the criminal classes would probably continue to succeed in diverting an amount of these drugs into improper channels and thereby deprive some needy patients of the quality and quantity of some drugs required in dealing with certain diseases. It would be too much to ask that a patient dying of cancer could not have all possible relief.

BISMUTH AS A SUBSTITUTE FOR ARSPHENAMINE.

The use of bismuth in the treatment of syphilis, according to the *Journal of Laboratory and Clinical Medicine*, was developed in France by Sazerac and Levaditi, who recognized the value of the earlier uncompleted work of Sauton and Robert of the Pasteur Institute. Between January and October, 1922, twenty-three articles on the use of bismuth in syphilis have been recorded in the quarterly cumulative index, coming from the following eight countries: Argentina, Denmark, Italy, Brazil, Uruguay, Germany and Switzerland. During the same period the treatment was not discussed in the American medical press.

The investigators have found the tartro-bismuthate of sodium and potassium the most active and the least toxic preparation, given subcutaneously or intramuscularly, and preferably in suspension in oil. Its intravenous use is absolutely contraindicated.

According to the authors it is particularly useful in the contagious stages, and causes more rapid and complete disappearance of the contagious lesions than does arsphenamine. No untoward effects have been reported other than a tendency toward stomatitis similar to but usually less severe than that following the use of mercury.

SCIENTIFIC MONOPOLIES.

The *London Medical Press and Circular*, in its issue of December 6, 1922, reveals the attempts of the Medical Research Council to claim the premier position as the scientific authority in England. If their attempted monopoly succeeds, whatever field of research they appropriate "there must be no independent interlopers, investigators whose results might, by chance, surpass those of the Council." The *Medical Press* expresses the view that if the Medical Research Council are permitted to exercise and add to their autocratic control of science the effect will be to render nugatory the efforts of independent investigators. The attempt is clearly one to overbear competition, leaving the field open to the Medical Research Council to preach the gospel of science exclusively.

We do not believe that the oligarchical control of independent thought has reached such a pass in this country, although, with the rate at which we are rushing towards the autocratic and bureaucratic control of almost every other phase of life, and with the increasing power of some of our great scientific institutions, there is some danger that Science itself may fall under the rule of the rubber stamp.

Science must know no master; she must not be forced to conform to passport regulations. The right to learn and to impart our knowledge must not be infringed upon. The garret of Bernard and the dismal workroom of Pasteur have given to the world more than many a marble laboratory can ever hope to produce.

News Notes.

The Lynn Medical Fraternity.—The Annual Meeting and dinner of the "Lynn Medical Fraternity" was held at Huntt's Banquet Hall, Central Square, Lynn, on February 1, 1923, at 6 P. M., with forty members in attendance. The following officers were elected for one year: President, Butler Metzger; vice president, Roy W. Mathes; secretary-treasurer, Edward S. O'Keefe; executive committee, E. M. Dolloff, E. A. Merrill, Loring Grimes, G. C. Parcher, W. D. Harris. The essayists of the evening were Dr. L. E. Phaneuf of Boston, who spoke upon Prolapsus Uteri and its surgical treatment, and Dr. F. G. Brigham of Boston, whose subject was "The Modern Treatment of Diabetes." Adjourned 9. 50 P. M.

Wm. T. Hopkins, *Reporter*.

Death Rate in Boston.—During the week ending February 3, 1923, the number of deaths reported was 313, against 229 last year, with a rate of 21.19. There were 40 deaths under one year of age, against 38 last year. The number of cases of principal reportable diseases were: Diphtheria, 96; scarlet fever, 58; measles, 91; whooping cough, 108; tuberculosis, 35. Included in the above were the following cases of non-residents: Diphtheria, 18; scarlet fever, 17; measles, 1; tuberculosis, 3. Total deaths from these diseases were: Diphtheria, 6; scarlet fever, 3; measles, 2; whooping cough, 5; tuberculosis, 12. Included in the above was the following case of a non-resident: Diphtheria, 1.

MAINE NEWS ITEMS.

The following item appeared not long ago in the *New York Times*: "Maine Bars Ice in Drinks. New Law Prohibits Its Public Use Even in Water.

"Augusta, Maine, December 5.—Maine is determined to be out front among all the states of the Union in its prohibitory laws, whatever may be said about the enforcement thereof.

"Beginning today, ice cannot be legally served in or for any drinks in the hotels or public eating places of any sort—not even for water. Under the new law the ice cannot legally come in contact with the fluid to be drunk.

"The keynote of this law is health. Officials point out that there is danger of the existence of harmful bacteria in the ice; that, while some of it is all right, a great portion of it comes from rivers and streams that are subject to pollution."

The following copy of the Rules and Regulations of the State Department of Health relating to common drinking cups and common towels explains just what is required by the Maine law. The law is, therefore, not as drastic as implied in the *Times* article:

"Section 1. Whereas it has been demonstrated that what is known as the common drinking cup and the common towel are dangerous to the public health and a source of communication of contagious and infectious diseases, therefore, under authority conferred by Chapter 197, Public Laws of 1917, as amended by Section 14 of Chapter 172 of the Public Laws of 1919, the following rules and regulations are hereby made by the State Department of Health to be in effect on and after October 1, 1922:

"Section 2. It shall be unlawful for any person, firm or corporation operating any hotel, rooming house, or any place where meals or refreshments are sold, any school, church, public building, hospital or charitable or other institution, railroad train or other common carrier, station, waiting room or any place of recreation or amusement, factory or other place, where people are employed, to provide for use, or allow to be used the common drinking cup in any of said places.

"Section 3. It shall be unlawful for any person, firm, or corporation operating any hotel, rooming house, or any place where meals or refreshments are sold, any school, church or public building, hospital or charitable or other institution, railroad train or other common carrier, station, waiting room or any place of recreation or amusement, factory or other place, where people are employed, to provide for use or allow to be used the common towel in any of said places.

"Section 4. No cask, water cooler or other receptacle shall be used for storing or supplying drinking water to the public or to employees unless it is covered and protected so as to prevent persons from dipping the water therefrom or contaminating the same, and no ice shall be allowed to come in direct contact with water or other liquid to be used for drinking purposes in such containers. All such containers shall be provided with a faucet or faucets or other suitable device for drawing water or other liquids; provided, that jugs, cans, buckets, pitchers and similar receptacles without faucets or other devices for withdrawing the liquid may be used, if the liquid is protected against contamination and is withdrawn by pouring only.

"Section 5. The common drinking cup used for drinking purposes is defined to be any cup, glass or other utensil used for conveying water or other liquid to the mouth by more than one person without first being thoroughly cleansed with soap and water and boiling water, or with steam.

"Section 6. The term common towel as used herein shall be construed to mean a roller towel, or a towel intended or available for common use by more than one person without being laundered after such use.

"Section 7. It shall be the duty of the State Department of Health, all district health officers, local health officers, boards of health, and municipal officers to enforce the provisions of this act.

"Section 8. Whoever violates any of the provisions of the preceding Sections 2, 3, and 4 shall be liable to the penalties provided by Section 15 of Chapter 172 of the Public Laws of 1919, namely, a fine of not less than $10 nor more than $100 for each offense. Municipal and police courts and trial justices shall have jurisdiction of all offenses under this act.

"Approved by the Public Health Council, June 6, 1922."

VENEREAL DISEASE CLINIC TO BE OPENED.—The city of Auburn will establish a venereal disease clinic in the near future under the direction of Dr. Leo F. Hall, city health officer.

Dr. George A. Coombs of the State Department of Health is doing a most energetic and valuable piece of work traveling all over the State, into the most remote rural districts, and giving his very concise and valuable lectures on venereal disease. All medical societies and nurses' organizations have been covered and great numbers of lay audiences are reached by this one man's activities. Dr. Coombs is doing a splendid piece of work and its success is due in large measure to his untiring enthusiasm and devotion to his work. His lantern slide talks are particularly clear and instructive.

ANDROSCOGGIN SANATORIUM REOPENED.—The tuberculosis sanatorium owned by the Androscoggin Anti-Tuberculosis Association, used until recently by the Federal Government for the care of service men, has been reopened by the Association for use by residents of the county. Dr. Ralph Goodwin is the physician in charge.

"TEN BOOK" FOR HEALTH JUST ISSUED.—Metropolitan Life contributes cost of printing. The Maine Public Health Association issues a new publication on many health subjects.

The most important publication ever issued by the Maine Public Health Association is just about off the press. So far as can be learned nothing like it has ever been issued by a state organization engaged in public health work.

It consists of ten brief but comprehensively worded chapters, each chapter on some one important phase of health work. Each chapter consists of ten simple, word-of-one-syllable paragraphs.

Before it was sent to the printer, the manuscript for "The Ten Book" was submitted to and approved by the Maine State Department of Health and the Maine Medical Association's Committee on Public Relations.

The Metropolitan Life Insurance Company, as a most encouraging contribution toward the state-wide effort that Maine is making to become "The Healthiest State," has borne all of the cost of getting out the first edition of 30,000 copies.

A number of the division chairmen of the Maine Public Health Association have contributed chapters of "The Ten Book." Dr. Risley, on "Cancer," Dr. Welch on "Tuberculosis," Dr. Jordan on "Dental Hygiene," Dr. Beach on "Eyes," Dr. Tyson on "Mental Hygiene," and Miss Taylor on "The Modern Health Crusade." Miss Soule, the state supervising nurse, has contributed chapters on "The Public Health Nurse" and "Child Welfare." Dr. G. A. Coombs, head of the State Health Department's Division of Social Hygiene, has contributed a chapter on that subject. Dr. B. L. Bryant, Secretary of the Maine Medical Association, prepared an interesting foreword concerning the work of the family doctor. Copies of "The Ten Book" will be available without charge through local public health nurses, health officers and local health associations and committees, or single copies will be mailed upon request upon receipt of a two-cent stamp.

MANY ATTEND N. E. CONFERENCE.—The New England Conference on Tuberculosis, which met in Augusta, September 28, 29 and 30, was attended by nearly 300 delegates from eleven states and Canada. The several sections of the conference for doctors, nurses and secretaries each had programs of unusual interest. Governor Baxter, in his address of welcome, challenged the other states to equal Maine in her efforts to become "The Healthiest State." A pleasing feature of the three-day program was the social evening at the State House on the 29th. The rotunda of the State House was trimmed to represent a cornfield. The State Department of Education staged a one-act comedy, "The Rural School." The State Department of Agriculture conducted a corn husking contest, a program of barn and modern dances was given, and a committee of Augusta club women served refreshments of pumpkin pie, milk and doughnuts. R. V. Spencer of Boston was elected president, and Willis Chandler of Providence was named secretary.

MAINE WINNING FIGHT ON TUBERCULOSIS.—Maine is winning its fight against tuberculosis. For the year 1921 there were 663 deaths from this disease in Maine, or a rate of 81.9 per 100,000 population, compared with a rate of 91 per 100,000 in the registration area of the United States. This is an entirely different story than the one recorded a few years ago, when our rate was 202 per 100,000 population and the total number of deaths each year was in excess of 1500. There is yet much to be done, however. On the basis of known figures there must be more than 6000 living cases of tuberculosis in Maine today. They should be saved. They will be saved if everyone will help spread the message of health, how to keep it if you have it, and how it may be possible to regain it if it has been lost.

E. H. RISLEY, Waterville, Me.

LEGISLATIVE MATTERS.

ON Friday, January 26, a hearing was held before the Commissioner of Public Welfare, at which permission was sought to incorporate a charitable hospital on Newbury Street. Dr. Francis A. Cave, the leading local exponent of the Abrams idea, was to be the physician in charge. He stated that the methods to be employed would consist of osteopathic methods and those depending upon the use of "radiant energy." Electronic diagnosis and treatment would also be employed. There appeared to oppose this petition Dr. John Bartol, Dr. James Stone, and Dr. G. G. Smith.

ANNUAL MEETING OF THE BOSTON TUBERCULOSIS ASSOCIATION, JANUARY 25, 1923.

THE meeting was called to order by the President.

1. Reading of the minutes of the last meeting. On motion of Dr. Minot it was voted that the minutes of the last meeting be accepted and placed on file.
2. The President presented the report of the Treasurer. On motion of Dr. Clifford it was voted that the report of the Treasurer be accepted and placed on file.
3. The President presented the report of the Auditor. On motion of Mr. Spencer it was voted that the report of the Auditor be accepted and placed on file.
4. Report of the nominating committee read by Dr. Hawes: President, Dr. John B. Hawes, 2nd; Vice-President, Dr. James J. Minot; treasurer, Mr. George S. Mumford; clerk, Miss Isabel Hyams. List of members of the Council was also read. It was moved by Dr. Bowditch that the report of the nominating committee be accepted, and that the Clerk cast one ballot for these officers of the Association for the ensuing year. This was done and the President declared these officers duly elected for the ensuing year.

The President, Dr. Hawes, then spoke as follows in regard to the Council: The word "Council" would necessarily mean that it is an organization or group of members of this Association who are especially interested and fitted to advise and to be of help in our work. Since I have been President of this Association the Council has held two meetings yearly of about five minutes in length and has done nothing else. I feel that the Council should do more than this, and I would like to have each member of the Council feel that it is his or her job at some time or another to go out to our Preventorium and see what we are doing there. I should like to have Miss Billings feel free, and I should like to feel free, to come to members of the Council and ask for help and advice, and I should like to feel that they will come forward with such help and advice. I do not want this elaborate and imposing list of names to be merely a list of names. I want them to do something. When the next seal sale campaign opens I want members of the Council to help Dr. Hill, and I beg the members to keep this in mind.

REPORT OF THE PRESIDENT.

The report of the President of an Association such as this consists of a review of the work of the past year, which I hope is a report of progress. A little French chemist now here is making, I might say, a financial invasion of the

United States; but he has done one service: he has introduced to us a little epigram which we might well adopt and ask ourselves, as an efficiency test, *i.e.*—are we as an Association, every day, in every way, getting better and better? That is a question which we might well ask and ask seriously. Have we made progress during the past year, or are we at a standstill? Are we content with those things that we have done in the past, or are we looking forward with visions of big things in the future? As the result of our last year's work is Boston a healthier and a better place in which to live; and is it going to be a better and healthier place for the future in which our children are going to live? I shall now review some of the things we have done:

INSTITUTES FOR PHYSICIANS AND NURSES.

The year before last we inaugurated the custom of having an institute for physicians. There were some who thought this would not be of value and would not be attended; but the fact remains that between four hundred and five hundred busy general practitioners of Boston—the men whom we wanted to get hold of—came and attended this meeting at the Massachusetts General Hospital, giving two days of their time. Here the new and best methods of diagnosis, treatment and handling of tuberculosis were discussed. Encouraged by this, we repeated it last year, and not only held an institute for physicians but one for nurses as well. The one for nurses I feel is particularly important in order that nurses who are engaged in health work all over this state, and particularly in Boston, may see what others are doing and profit thereby.

THE MODERN HEALTH CRUSADE.

You all know what the Modern Health Crusade is, simply a picturesque and visible way of teaching children health habits. Through the hard work of our Secretary, Miss Billings, there have been approximately 10,000 children enrolled—doing their daily health chores and getting health habits impressed upon their minds at a time when these things can be impressed. The health crusade is one of those things the tangible results of which neither you nor I can see at the present time, but I know that it is doing much good.

LECTURES.

I have always been a bit of a skeptic as to how much good lectures do. It is like certain forms of medicine—they do not do any harm and they may do good. It is the spirit and zeal of the person who gives the lecture that makes it count. We have, during the past year, given something between sixty and seventy lectures. Many of these have been given to nurses and groups of women by Miss Billings. I can say that there is a spirit and zeal behind and in Miss Billings that makes her words effective. It is not what she says; it is the manifest sincerity and belief in what she is getting at that makes the lectures and the talks which she gives really accomplish something. Others of us have helped. Dr. George Hill and I, thanks to Mr. Ritchie, engaged in the interesting and somewhat novel experience of broadcasting. Various of my patients from all over Massachusetts have called me up and said they recognized my voice and were kind enough to say they enjoyed what they listened to.

LITERATURE.

Approximately 150,000 cards on health habits have been distributed to children. In the old days in the Massachusetts General Hospital when a patient came in with this or that disease, on leaving he was handed a sheaf of literature. I have a very good idea of what became of it. With children it is different. I believe that these 150,000 health cards are doing good and that the distribution of such cards is an investment well worth continuing.

PUBLICITY.

I am a great believer in publicity and that it is well to "Let your light so shine" and to let it shine where people can see it in foreign languages, and in the parts of this town with which you and I perhaps are not so familiar. I think this is one of the big things which we have done. We are particularly fortunate in having a man of the caliber of John Ritchie, who is working for us as our publicity agent. I want to continue this more and more; I want to bring the work which we are doing before the public of this city of Boston to make them realize that we are in earnest.

OCCUPATION FOR CONSUMPTIVES.

We attempted one thing last year which for lack of funds we gave up—to find occupations for consumptives. You have no idea how many people handicapped by consumption come to Miss Billings looking for work. You have no idea how many employers we know who have said they could give half or part-time work to such people. We aim to get these two groups of people together, and to do this we must have a nurse or social worker. This year we hope very much to be able to undertake this new field of endeavor.

CHRISTMAS SEAL SALE.

Last year we raised $14,000, which was the biggest amount the Association has ever made. This year we changed our methods and depended largely, as you know, upon sending out letters, enclosing a self-addressed stamped envelope and

$2.00 worth of seals. We did not ask them to hunt up our address in the telephone book, nor did we ask them to take the $2.00 worth of seals. We said we would be glad if they would take all of them, but if not we would like to have as many as possible taken. There were two people in this city as far as I know who objected to this method. There were something like 29,998 who did not object to it. The result is that so far, instead of $14,000, we have approximately $25,000. I want to express my sincere thanks and appreciation to Dr. George Hill and his corps of workers, who have formed the auxiliary of this Association. Right here in Miss Billings' absence, I wish to say how much she has put into this work—eighteen hours a day or so during the six weeks that the sale was on.

PRENDERGAST PREVENTORIUM.

I want to speak to you about our little preventorium. Last year I spoke in terms of what we hoped to do and how we hoped to have a place in our thirty acres to take these little children—not consumptives—not tuberculous—but potential consumptives, if you will—where we could take them and render them immune to the tuberculosis which threatened them. Now I can speak to you of what we have done. I have a few slides here which will show you better than in any other way the present situation. (Slides of the camp shown.)

Of course we have had our problems in this little institution. I am ever so glad we have started things in a small way instead of waiting as we were urged to do. It has been a big factor in raising money—to be able to say that we have these twenty children, have had forty children in all, and that we want to keep this institution going because we know it is doing good work. We need better heating, kitchen, bathing, light and power facilities, and these improvements we can now plan for. We wish to build on a wing for boys, and enlarge the total number of beds, so that we can have a group of children that will count for something. More important than all this, we must have someone to follow up these children after they have left our preventorium. They must not be allowed to go back and develop the same old habits of life, going into the same conditions of living which we have tried so hard to eradicate. This is going to be one of the expenses of the coming year. We hope to have a nurse or social worker who can manage these two things,—to see that these children are regularly followed up and to find occupations for those consumptives who are amply able to work if they can do so under proper conditions.

Is this worth while? Personally I think it is. Out in the pure atmosphere of Cambridge iconoclasts seem to flourish. Two years ago at our annual meeting I commented on a certain article which suggested that all voluntary associations close up shop and go out of business. Recently, Richard Cabot, an iconoclast—a most cheerful, delightful and brilliant iconoclast—has said, "What are you doing, and what can you prove? You all know perfectly well that the death rate from consumption decreased just as rapidly before the anti-tuberculosis campaign as it has since then." His theory is that it is not the National Tuberculosis Association of the Massachusetts League or the Boston Association that has done anything, but that it is the hand of God. We are immunizing ourselves. We are gradually getting so that we adults do not contract measles, and so for the same reason we do not get tuberculosis as much as our ancestors did. He suggested that we all shut up shop for five years and see what happens. Interesting if true. One of the big things that Richard Cabot has done is to make people scrap—to make them differ with him and thereby *think*. I am at present engaged in writing up a certain disease simply because Richard Cabot says it does not exist. I know it does and I am getting busy to prove it. It is up to us to get busy and to keep on getting busy to prove to iconoclasts that we are doing something that is worth while. When I was a youngster my mother and older brothers used to talk of things which meant nothing to me. I remember a certain quotation from Emerson which ran, "Once to have greatly dreamed precludes low ends." Our Association has dreamed and I think it has dreamed greatly. Dr. Minot, Dr. Otis and I have dreamed of this preventorium out in Mattapan. I can see in my mind's eye that institution as I hope it will be five or ten years from now. We might well feel and remember those words of Emerson—"Once to have greatly dreamed precludes low ends." That is what I want this Association to do, to dream in the effective, real sense of the word, so that five or ten years from now we will have something to show for what we are doing.

We hoped to have Dr. David Lyman from Connecticut to speak to us and tell us what they are doing down there, but he is unable to be present. Instead of going to the south of Massachusetts we have gone north to the State of New Hampshire, unto whose hills we lift our eyes. We are fortunate in that we have the Secretary of the New Hampshire Tuberculosis Association, who is going to tell us from his point of view what he conceives to be the function of state and local tuberculosis associations—Dr. Robert Kerr of New Hampshire.

DELINQUENCY AS A PUBLIC HEALTH PROBLEM.

On February 15, 1923, at 2 p.m., Dr. William Healey of the Juvenile Court will deliver an address on "Delinquency as a Public Health Problem." This exercise is given in connection with the course on Mental Hygiene as arranged by the School of Public Health of the Harvard Medical School.

Physicians are invited.

RESOLUTIONS

ADOPTED AS A PROTEST AGAINST CERTAIN STATEMENTS PURPORTING TO BE A REPORT OF A STATEMENT MADE BY A REPRESENTATIVE OF AN INSURANCE COMPANY.

WHEREAS, the Boston Evening *Transcript* printed a report of an address by a representative of an industrial insurance company (Employers Liability Assurance Corporation, Limited) at a meeting of the Associated Industries on October 17, 1922, in which the charge was made that physicians and hospitals were making exorbitant charges for the care of injured workmen, be it

RESOLVED, by the members of the Essex North District Medical Society, that they resent and deny the truth of such charges, and be it further

RESOLVED: that this attack on the honor of a considerable number of the profession and prominent business men (who are the trustees of the accused hospitals), citizens of the State of Massachusetts, demonstrates what deplorable conditions arise when companies organized for private profit are admitted to a part in the administration of the state laws. This is particularly deplorable when the citizens are the injured working inhabitants of the state, and the company's policy is dictated from a foreign country. And be it further

RESOLVED: that the members deeply appreciate the repudiation of these unjust statements by the Liberty Mutual Insurance Company of Boston and the Federal Mutual Liability Insurance Company of Boston. And be it further

RESOLVED: that a copy of these resolutions be transmitted to the BOSTON MEDICAL AND SURGICAL JOURNAL for publication and a copy to each of the insurance companies named above.

January 3, 1923.

MEETING OF THE MASSACHUSETTS ASSOCIATION OF ASSISTANT PHYSICIANS

Forty-one members of the Massachusetts Association of Assistant Physicians were the guests of the Superintendent, Dr. John B. MacDonald, at the Fifty-eighth Meeting of the Society held at the Danvers State Hospital, on Wednesday, January 24, 1923. Through the morning and early afternoon the members were escorted through the Hospital and given the opportunity of viewing the institution.

After an excellent luncheon, served at 1:30 P. M., the meeting was called to order by the President, Dr. Arthur E. Pattrell. There being no business on hand, the staff proceeded with the program.

Dr. G. C. Randall presented an unusual case of Chronic Cyanosis in General Paralysis. Histories were negative throughout. In younger life, the man had been very well developed and considered of good color. At the age of 22, he became infected and this was followed by a chancre. At the age of 31, it was noticed that he gradually became very pale. This excited comment, as it particularly contrasted with his previous fine color. After several months a general cyanosis made its appearance, gradually growing darker in color. He continued work for approximately twenty years, his cyanosis not being constant in degree. Early in 1922 he became depressed, developed ideas of reference and persecution and was admitted to Danvers State Hospital in December of that year. The diagnosis of general paralysis was supported by characteristic changes in both blood and spinal fluid. Physical examination revealed general cyanosis varying between greyish blue and dark blue. Blood pressure S.180-205. D. 90-125. Complete blood examination, sections of skin, and roentgenograms of head, chest and extremities negative. Careful eliminative diagnosis resulted in the decision that there was a communicating opening between the auricles, possibly gummatous in origin. Discussion by Drs. Weyler, Kelly, Thompson, Green, Clay, Tillotson and Randall.

Complete autopsy findings of three cases of Chronic Alcoholism were presented by Dr. Otis F. Kelly. This paper demonstrated the relationship existing between the brain lesions produced by general paralysis and alcoholism. By comparing the microphotographs of these cases with general paralysis and the normal, Dr. Kelly brought out this marked similarity. These cases, for example, showed the meningeal oedema, diffuse gliosis, presence of red cells, vascular proliferation and degeneration of nerve cells commonly expected in general paralysis. The particular value of these findings lay in their serving as a more definite basis of speculation on the aggravation of general paralysis, rather than the theory that the rôle of alcoholism is merely that of reducing the vitality and general resistance. Discussion by Drs. Bonner, Johnson, Ashmore and Kelly.

The Assistant Superintendent, Dr. Edgar M. Blew, read a very able paper on Occupational Therapy from the point of the Psychiatrist. He pointed out that occupation must be regarded as a distinct remedial force, and as such must be applied in the proper sphere and then be directed with care and skill. The greater part of mental hospital cases require retraining of impaired functions and if this opportunity for re-education is not offered or is underestimated, it may mean the patient's failure in attempting to become a self-supporting citizen on discharge. Dr. Blew feels that to give our insane patients the opportunity to do and plan and create, is one of the most important of our duties as psychiatrists. In doing this the therapeutic viewpoint must ever be kept in the foreground, lest the department become overly enthusiastic about quantity production in the hands of experts and lose sight of the case of stupor or depression which should have our very best efforts. Discussion by Drs. Overholser, Dexter, Dayton and Blew. Meeting adjourned.

NEIL A. DAYTON, M.D., *Secretary*.
Wrentham State School.

Miscellany.

THE NEW "INFLUENZA."

A SHORT time ago a distinguished physician expressed the view that "the face of disease" is changing. He said that practitioners in many parts of the country told him that they could no longer easily recognize the text-book descriptions of the various maladies.

The statement has met with no contradiction. It seems to derive added weight from the rather unusual character of the mild epidemic now prevalent in London and elsewhere, to which reference has already been made in these columns. This epidemic seems to be regarded as "influenza," yet it scarcely conforms to the usual picture of that disease. Nor is there, as yet, any appreciable rise in the mortality from influenza, which, in London at any rate, remains very low.

The most conspicuous feature of the present trouble is a tendency to sickness or loss of appetite accompanied by various nervous disorders ranging from neuralgia to profound depression. Loss of spirits seems to be almost invariable; this, however, occurs so insidiously that the patient tends to take a "mental" as opposed to a physical view of his condition. Recovery is not very rapid and some patients appear to remain unwell for several weeks.

There is no doubt of the epidemic character of the complaint, for large numbers of people are affected. On the other hand, it is difficult to use the title "influenza," because there is lacking the usual cold, or coryza, of that complaint and because the ordinary complications of influenza have not appeared. Nevertheless, we may note that the temperature this winter has not been so low as that experienced in December of last year, when influenza developed on a big scale.

There is certainly need at the moment for a careful study of the new features of disease. If, as seems probable, our text books are obsolete in certain directions, it is time that the necessary emendations were made. Names such as "influenza" have been overworked; their too ready use is apt to obscure ignorance and so retard study.—*Science*.

RHODE ISLAND SOCIETY OF MENTAL HYGIENE.

IN Providence this society was launched at an enthusiastic meeting on October 31. This public conference, which was attended by some 700 persons, was preceded by a tea for about 125 ladies, and by a luncheon of business men.

Dr. Arthur H. Ruggles, Superintendent of Butler Hospital in Providence, was elected President, and an Executive Committee was appointed. Quarters have been secured in a building occupied by various social agencies, including the Red Cross and the District Nursing Association.

Miss Esther F. Greene, of the Smith College School for Psychiatric Social Work, is the new Society's social worker.—Monthly Bulletin, Massachusetts Society Mental Hygiene.

DIVISION OF MENTAL HYGIENE.

DURING the period of the war and for several years following, the activities of the U. S. Public Health Service have dealt largely with the ex-soldier and his problems, special attention having been given the ex-soldier suffering from mental trouble.

Recently it has been determined to extend the scope of these activities to the civil population, and to that effect the Division of Mental Health of the U. S. Public Health Service has established headquarters in Boston, where it maintains an office and a staff. Dr. Walter L. Treadway, Director of the Division, has secured quarters in the Harvard Medical School, Department of Preventive Medicine, where he will carry on research studies into the community and social causes of mental disorder.—Monthly Bulletin, Massachusetts Society Mental Hygiene.

ELECTIONS TO MEMBERSHIP IN NATIONAL COMMITTEE FOR MENTAL HYGIENE.

Hon. Herbert C. Parsons and Dr. Frederick C. Shattuck of Boston were elected to membership in the National Committee for Mental Hygiene, while Dr. Harvey Cushing, Dean Roscoe Pound, Dr. Joel E. Goldthwait, Dr. Austen Fox Riggs, Pres. William A. Neilson, and Dr. Henry R. Stedman were reëlected at the Thirteenth Annual Meeting and Luncheon of that organization, which was held at the Pennsylvania Hotel, in New York, on November 9. Addresses at this meeting were made by Dr. Haven Emerson, Prof. Stephen P. Duggan, and Mr. John J. Carty of New York, Professor Elton Mayo of the University of Queensland, Australia, and Dr. Frankwood E. Williams, Medical Director of the National Committee.—Monthly Bulletin, Massachusetts Society Mental Hygiene.

FEDERAL INCOME TAX FACTS.

Revenue officers are visiting every county in the United States to aid taxpayers in the preparation of their income tax returns for the year 1922. Information concerning the date of their arrival and the location of their offices may be obtained by writing the collector of internal revenue for the district in which the taxpayer lives.

Failure to receive a form does not relieve the taxpayer of his obligation to file a return and pay the tax on time, on or before March 15, 1923. The forms, 1040A for filing returns of net income $5000 and less and 1040 for filing returns of net income in excess of $5000, may be obtained from collectors of internal revenue and deputy collectors.

Returns are required of every single person whose net income for 1922 was $1000 or more or whose gross income was $5000 or more and of every married person whose net income was $2000 or more or whose gross income was $5000 or more.

In the making of his income tax return for the year 1922, a taxpayer, if single, is allowed an exemption of $1000. A married person, or head of a family, whose net income for the year 1922 was $5000 or less is allowed an exemption of $2500. The exemption allowed a married person or head of a family whose net income was in excess of $5000 is $2000. A head of a family is a person who actually supports one or more persons living in his or her household who are closely related to him or her by blood, marriage or adoption.

An additional credit of $400 is allowed for each person (other than husband or wife) dependent upon the taxpayer for chief support, if such person is under 18 years of age or incapable of self support because mentally or physically defective. A single man whose net income for 1922 was $2000 and who supports in his home an aged mother would have no tax to pay, but would nevertheless be required to file a return. The fact that a person's income may be nontaxable by reason of the exemptions does not nullify the requirement to file a return if his income was within the prescribed figures—$1000 if single and $2000 if married.

The normal tax is 4 per cent. on the first $4000 of net income in excess of the exemptions, and 8 per cent. on the remaining net income. The tax may be paid in full at the time of filing the return, or in four installments due on or before March 15, June 15, September 15, and December 15.

The revenue act of 1921 provides that an income tax return shall be filed by every person, married or single, whose gross income for the year 1922 was $5000 or more. Broadly speaking, gross income includes all income received by the taxpayer during the year from salary or wages or from "business, trade, profession or vocation," dealing in property, or the transaction of any business carried on for profit. Net income, upon which the tax is assessed, is gross income less certain specified deductions for business expenses, losses, bad debts, taxes, contributions, etc.

Among the most important items in the returns of many taxpayers are the deductions for business expenses.

A professional man, doctor or lawyer, may claim as deductions the cost of supplies used in the practice of his profession, expenses paid in the operation and repair of an automobile used in making professional calls, dues to professional societies, subscriptions to professional journals, office rent, and the cost of fuel, light, heat and water used in his office, and the hire of assistants.

Deduction of personal or living expenses, such as rent paid for a dwelling, hire of domestic servants, education of children, etc., is expressly disallowed by the revenue act.

In making out his income tax return for the year 1922, the taxpayer is required to include all items of gross income. The professional man, doctor, lawyer, dentist, must include all fees and other compensation for professional services.

In order that they may obtain full advantage of the deductions from gross income to which they are entitled, taxpayers are advised by collectors of internal revenue to study carefully the instructions on the forms for making returns under the head "Income from Business or Profession."

Liability to file an income tax return for the year 1922 is determined by a person's status on the last day of the taxable year, December 31, if the return is made on the calendar year basis, as most are. If on that date he was single he must file a return if his net income for 1922 was $1,000 or more, and he is allowed only an exemption of $1,000. If he was married on December 31 he is granted the exemption allowed a married person for the full year, $2,500 if his net income was $5,000 or less, and $2.000 if his net income exceeded $5,000. The bride's income, however, must be considered with that of her husband, the larger exemptions being allowed married couples living together. A widow or widower whose spouse died before the end of the year is classed as a single person. Divorcees and persons separated by mutual consent also are classed as single persons.

Similar conditions exist with respect to the head of a family. If, during the year, his support of relatives ceased he is entitled only to the $1,000 exemption. A man who has a dependent child, not mentally or physically defective, that attains the age of 18 years just before the close of the taxable year, cannot claim the $400 credit for a dependent.

To avoid penalty, income tax returns must be filed with the collector of internal revenue for the district in which the taxpayer lives or has principal place of business on or before midnight of March 15, 1923.

Where additional time is required because of illness or absence of the taxpayer from home, the collector may grant, upon application before the return is due, March 15, an extension of not to exceed 30 days. If an accurate return cannot be made within the 30 days extension period, a request for a further extension must be made to the Commissioner of Internal Revenue, Washington, D. C. Collectors have not authority to grant an extension exceeding 30 days.

Failure to make a return on time subjects the delinquent to a penalty of $1,000 and an additional penalty of 25 per cent. of the amount of tax due. If the failure is willful, however, or an attempt is made to evade the tax by filing a false return, the offender is liable to imprisonment and to a fine of not more than $10,000 and costs, in addition to a penalty of 50 per cent. of the amount of tax evaded.

RECENT DEATHS.

Dr. Willard Shepard Everett, a retired Fellow of the Massachusetts Medical Society, died following a fractured thigh, at the Manhattan Hospital, New York City, January 31, 1923, at the advanced age of 91. Dr. Everett was a practitioner of Hyde Park for 39 years, removing to Waban in 1903 and then to Newton Upper Falls, where he lived until a very recent time when he went to the Bronx, New York, to make his home with his nephew, Everett Ellis. Born in North Andover, Mass., September 18, 1831, he received private instruction in medicine, joined the Bowdoin medical class of 1864, and finally took his medical degree at Harvard Medical School in 1864, in the same class as Samuel Langmaid, M. F. Gavin and H. O. Marcy. The next year he joined the State Medical Society and settled in the Fairmount region of Hyde Park, now a part of the City of Boston. During the early nineties he served as councilor of the Norfolk District Medical Society and in 1896 was president of that district. In 1902 Dr. Everett delivered the annual discourse before the Massachusetts Medical Society, taking as his title, "The Present Status of the Practice of Medicine and the Urgent Need of More Stringent Application of Hygiene and Sanitary Laws."

Correspondence.

MEDICAL RELIEF FOR OUR CITIZENS.

February 3, 1923.

Mr. Editor:

Your editorial, "The Problem of Medical Relief for Our Citizens," in the Journal of February 1, provokes comment.

On the economic side of the question, mention might be made of the total of money spent annually by state, city and town and private agency in just such work. It may be distasteful to feel that humanitarian endeavors are limited by economic considerations, yet the economic basis, after all, controls the situation. Under the scheme described in brief in your editorial, it would appear that the beneficiaries would be those people who have difficulty in paying large taxes (not to say, and are unable to buy tax-exempt bonds). As yet no method has been evolved whereby funds can be transferred from one's right-hand pocket to one's left-hand pocket, aided by a governmental agency, without some loss occurring in the process. The direct method may be cheaper. At least, the direct method would not magnify further our "aristocracy of the unfit" at the still more heavy expense of those bearing the burden of production of wealth and support of the Commonwealth.

The political features of such a scheme need not be discussed.

Nevertheless, I do believe unnecessary expense to be often incurred, in the care of the sick, by uncritical, too ready resort to more or less costly procedures, yielding information which should be apparent to intelligent observation. This fault seems to be educational, and may represent the medical equivalent of the current industrial suppression of intellect, in favor of the automatic machine. It would seem that one proper use for our dazzling apparatus would be to help the student to correlate laboratory and clinical findings, as an aid in future work. A certain degree of imagination and faith, on the part of the teacher, would be necessary in such education. Any degree of success along such lines would surely lessen the professional capital investment and running expense—and might even induce some graduates to believe that good work could be done in rural sections. Probably, also, fewer specialists of various kinds would develop. Still, a reasonable return would be afforded.

It may be, also, that modern commercial ethics have had an influence in the cost of sickness. This is a matter for the individual conscience, or, lacking that, a consideration of expediency.

Your article repeats a statement, also repeated in the daily press, to the effect that the moderate earner is usually in a hard case, under the hands of the average practitioner. I do not know who the original author of this statement is, but there is considerable presumption underlying it. There are, doubtless, weak brethren in our ranks, but there are many, many more of sound common sense and morality. There can be little doubt that a patient is better off in the hands of a man trained to see in a proper perspective, than in the hands of several specialists, who each survey a section. The specialist has a decided usefulness, but the great present need is "all-round men" of some caliber. In other words, let us keep the "diagnostic integrator" of a recently proposed and elaborate scheme for group practice, and dispense with the other seven or eight collectors of signs.

There are other considerations. There is one relating to the laborer and his hire—too little return, no laborer. There is another dealing with the fulcrum by which a patient is levered into living reasonably. The fulcrum is the cost of sickness, the lever the demonstrated fact that the best protection of health is good health. There is also the question of civic responsibility in general, this medical relief being merely a part of it. The Athenians developed a class of protected, irresponsible persons, and came to dire straits by attempting to defend their city with them. The Romans looted the then known world for food, amusement, etc., for a restless plebs. The Empire later had to draw on strangers for defense—and was not defended. We can loot only our fellow citizens. If a fundamental fault exists in our civic body let us face it squarely. Flight, while dropping our tinsel apples to delay pursuit, will avail not at all. The fault will have to be faced at the end of the run.

The answer to the vast problem involved seems to lie in human nature, coupled with a refusal to acknowledge the extreme slowness with which man climbs the little height between himself and the angels.

May I commend for earnest re-perusal the essays of Thomas Henry Huxley, and, a saying which the founders of Massachusetts exemplified nicely, that "it is a poor tub which standeth not upon its own bottom."

Oliver H. Stansfield, M.D.

UNITED STATES CIVIL SERVICE EXAMINATION.

The United States Civil Service Commission announces the following open competitive examination:

Junior Medical Officer and Assistant Medical Officer.—(Roentgenology; Psychiatry.)

Medical Officer.—(Tuberculosis; Neuropsychiatry; Internal Medicine and Diagnosis; Physiotherapy.)

Applications will be rated as received until the close of business on July 3.

The examinations are to fill positions in the Indian Service, the Coast and Geodetic Survey, the Public Health Service, and the Veterans' Bureau.

Competitors will not be required to report for examination at any place, but will be rated on the subjects of education and training, weighted at 30 per cent., and experience, weighted at 70 per cent.

Definite specifications as to education and experience requirements, and salaries and allowances, are given in the printed announcement, which will be furnished upon request. Application blanks may be obtained from the United States Civil Service Commission, Washington, D. C., or Secretary of the Board of U. S. Civil Service Examiners at the post office or customhouse in any city.

UNITED STATES CIVIL SERVICE EXAMINATIONS.

GRADUATE NURSE. GRADUATE NURSE (FOLLOW-UP).

Applications will be rated as received until July 3, 1923.

The United States Civil Service Commission announces an open competitive examination for graduate nurse, and graduate nurse (follow-up), for filling vacancies in the United States Veterans' Bureau and in the Indian and Public Health Services.

Requirements.—Graduate nurse: (1) Graduation from a recognized school for trained nurses requiring a residence of at least two years in a hospital having a daily average of thirty patients or more, giving a thorough practical and theoretical training, and (2) evidence of state registration, unless living in a state where there is no registration for nurses, in which case it must be stated in the application that the state required no registration for nurses.

For further information apply to the Civil Service Commission, Washington, D. C.

NOTICE.

The Essex South District Medical Society will meet Wednesday, February 21, at the Salem Hospital, 5:30 to 7:30. There will be demonstrations by members of the staff.

Dinner at 7:30. Speaker to be announced later.

Ralph E. Stone, *Secretary.*

MASSACHUSETTS STATE NURSES' ASSOCIATION.

The mid-winter meeting of the Massachusetts State Nurses' Association will be held on Saturday, February 17, 1923, in the Lecture Hall in the Boston Public Library, Copley Square.

An invitation is extended to all nurses. The program consists of meetings of the League of Nursing Education at 10 a.m., the Private Duty Nurses' section at 11 a.m., Public Health Nurses' section at 12 noon, and the Massachusetts State Nurses' Association at 2:30 p.m.

SOCIETY MEETINGS.

The annual meeting of the Massachusetts Medical Society will be held in Pittsfield, June 12 and 13.

DISTRICT SOCIETIES.

A list of society meetings is herewith published. This list will be changed on information furnished by the secretaries of the societies, and will appear in each issue.

Barnstable District:—Hyannis, May 4, 1923.

Bristol South District:—Fall River, May 3, 1923.

Essex North District:—Lawrence, Y. M. C. A. Building (Annual Meeting), May 2, 1923.

Meetings of the Suffolk District and the Boston Medical Library, at the Library:

February 28, 1923:—Medical Meeting. "Colitis," Dr. Henry F. Hewes, Boston.

March 28, 1923:—Surgical Meeting. "A Review of What Surgery Can Accomplish in Diseases of the Thoracic Organs, with a Forecast of the Future," Dr. Howard Lilienthal of New York.

April 25, 1923:—Annual Meeting. Election of Officers. "The Record of the Past Twelve Years in Syphilology, with a Forecast of the Future." A series of 10-minute papers. Dr. C. Morton Smith, Boston, will preside.

The Springfield Academy of Medicine meets the second Tuesday of each month. Schedule of speakers includes the following names: Dr. Alexis Carrel, Dr. W. B. Long, Dr. J. W. Williams, Dr. W. S. Thayer, and Dr. Barton Cooke, Hist. The date for each speaker has not been assigned.

Middlesex East District:—

March 21, 1923:—Mental Factors in Childhood. Paper by Dr. William Healy.

April 18, 1923:—Interpretation of Laboratory Findings. Papers by Dr. E. G. Crabtree and one to be announced later.

May 9, 1923:—Annual Meeting.

All meetings except the Annual Meeting will be held at the Harvard Club in Boston. A. E. Small, Secretary.

Worcester District meetings are scheduled as follows:

March 14, 1923:—The meeting will be held at St. Vincent's Hospital at 8.15 P. M. The program will consist of a series of papers by members of the staff.

April 11, 1923:—The meeting will be held at Memorial Hospital at 8.15 P. M., and the program will consist of a series of papers by members of the staff.

May 9, 1923:—Annual Meeting and banquet.

STATE, INTERSTATE AND NATIONAL SOCIETIES.

New England Pediatric Society:—The following are the dates for meetings the coming season. Each meeting is on the second Friday of the month at the Boston Medical Library: March 9, April 13 and May 11.

February, 1923:—Boston Medical History Club will meet the third Monday of this month.

March, 1923:—Massachusetts Society of Examining Physicians (date and place undecided); Hilbert F. Day, Secretary.

March, 1923:—Boston Association of Cardiac Clinics. Meeting March 15, 1923, at 8.15 P. M., Boston City Hospital. Subject: Prevention and Relief of Heart Failure.

March, 1923:—Boston Medical History Club will meet the third Monday of this month.

April, 1923:—New England Dermatological Society meeting, April 11, 1923, at 3 P. M., in the Surgical Amphitheatre, Boston City Hospital; C. Guy Lane, Secretary. Massachusetts Association of Boards of Health, April 26, 1923, Boston; W. H. Allen, Mansfield, Mass., Secretary.

April, 1923:—Boston Medical History Club will meet the third Monday of this month.

May, 1923:—Massachusetts Society of Examining Physicians (date and place undecided). American Pediatric Society meeting, May 31, June 1 and 2, 1923, at French Lick Springs Hotel, French Lick, Ind.; H. C. Carpenter, Secretary.

May, 1923:—Boston Association of Cardiac Clinics. Meeting May 17, 1923, at 8.15 P. M., Children's Hospital. Subject: Rheumatism and Chorea and Heart Disease.

June, 1923:—American Medical Association, San Francisco June 25-29, 1923; Olin West, Chicago, Ill., Secretary.

July, 1923:—Massachusetts Association of Boards of Health, July 26, Nantasket; W. H. Allen, Mansfield, Mass., Secretary